

**Industrie Cartarie Tronchetti (ICT) UK and Crag Hill Estates Ltd
(CHEL)**

Paper Mill Facility, Plot C, Airfields, Northern Gateway

Environmental Statement

Part 2 – Traffic and Transportation Technical Paper 2

Revision Four 16 September 2021



Revision Record

Revision Reference	Date of Revision	Nature of Revision	Author	Checked By
Vo1	19.8.21	Initial Draft	Fred Frempong Aaron Tilley	Aaron Tilley
Vo2	25.8.21	Second Draft	Fred Frempong	Aaron Tilley
Vo3	10.09.21	Third Draft	Fred Frempong	Aaron Tilley
Vo4	16.09.21	Fourth Draft	Fred Frempong	Aaron Tilley

Report Author	Fred Frempong – Curtins Consulting
Report Date	16 th September 2021
Project No.	B0704
Document Ref.	
Revision	Third Draft

Contents

1.	Introduction	1
2.	Documents Consulted	2
	National Planning Policy Wales (Edition 11)	2
	North Wales Joint Local Plan 2015	4
	Deeside Plan	5
	Other Policies	10
3.	Consultations	11
4.	Methodology and Approach	12
	Transport Assessment	13
	Travel Plan	13
	Detailed Assessments	14
	Severance	14
	Driver Delay	15
	Pedestrian Delay and Amenity	15
	Fear and Intimidation	15
	Accidents	16
	Receptors	16
	Environmental Impacts	17
	Significance of Effects	18
	Impact Prediction Confidence	19
5.	Baseline Information	20
	Locus Highway Network	20
	Highway Safety	21
	Traffic Flows	22
	Enabling Works – Development of Road 2 and Road 3 Vehicle Access	24
6.	Alternatives Considered	25
7.	Potential Environmental Effects	26
	Construction Phase	26
	Operational Phase	28
	Highway Operation	34
	Accessibility and Pedestrian Amenity	35
	Pedestrian Delay and Amenity	35
	Severance	36
	Further Accessibility Benefits	36
	Accidents and Safety	37

8.	Proposed Mitigation.....	39
	Construction Phase	39
	Operational Phase.....	40
	Mitigation 1	40
	Mitigation 2	41
	Accessibility.....	43
	Accidents and Safety.....	43
9.	Potential Residual Effects.....	44
	Potential Residual Effects – Construction Phase.....	44
	Potential Residual Effects – Operational Phase	45
10.	Additive Impacts (Cumulative Impacts and their Effects)	47
11.	Conclusion.....	50
	Reference List.....	52
	Appendices	53

Tables

Table 2.1 – FCC Parking Standards.....	10
Table 2.2 – Summary of Consultations and Discussions.....	11
Table 2.3 – Fear and Intimidation Thresholds	16
Table 2.4 – Potential Receptors	17
Table 2.5 – Environmental Impacts.....	18
Table 2.6 – Confidence Levels.....	19
Table 2.7 – Highway Safety	22
Table 2.8 – Approved CHEL Traffic.....	23
Table 2.9 – Approved PNGNL Traffic.....	23
Table 2.8 – Approved CHEL Traffic.....	23
Table 2.9 – Approved PNGNL Traffic.....	23
Table 2.10 – Approved CHEL Traffic	23
Table 2.11 – Approved CHEL Traffic	23
Table 2.12 – Significance of Effect – Construction Phase	28
Table 2.13 – Phase and Number of Staff	29
Table 2.14 – Mode of Travel to Work.....	31
Table 2.15 – Derived Mode Share	31
Table 2.16 – Staff Mode Share per Phase.....	31
Table 2.17 – Staff Mode Share per Phase.....	32
Table 2.18 – Total ICT UK Ltd Development Traffic per Phase.....	33
Table 2.19 – Total ICT UK Ltd Development Traffic	33
Table 2.20 – Significance of Effect – Operation Phase.....	38
Table 2.21 – Residual Significance of Effect – Construction Phase	45

Table 2.22 – Residual Significance of Effect – Operation Phase 46
Table 2.23 – Cumulative Development 48

Figures

Figure 2.1 – Sustainable Transport Hierarchy for Planning 3
Figure 2.2 – Employment Zones Used for Mode Share Derivation 30

Appendices

Appendix 2.1 – Transport Assessment

Appendix 2.2 – Framework Travel Plan

Appendix 2.3 – Receptor Plan

I. Introduction

- I.1. This Paper of the Environmental Statement has been prepared by Curtins.
- I.2. This Paper assesses the potential traffic impact of the proposed Paper Mill Facility prepared on behalf of ICT UK Ltd and Crag Hill Estates Ltd (CHEL) and should be read in conjunction with Appendix 2.1, which contains the Traffic Assessment (TA), and Appendix 2.2, which contains the Travel Plan (TP); both of which have been prepared by Curtins. The TA and TP have been used to inform the content of this Paper.
- I.3. This Paper also describes the methods used to assess the impacts, the baseline conditions currently existing at the Site and the surrounding area, appropriate mitigation measures, and the assessment of any residual impacts. This includes consideration of possible effects upon the capacity and operation of the local road networks (links and junctions), road safety, severance, driver delay, and pedestrian delay and amenity.
- I.4. The assessment criteria which will be used to identify the impacts are in accordance with the 'Guidelines for the Environmental Assessment of Road Traffic' published by the Institute of Environmental Management and Assessment (IEMA).

2. Documents Consulted

National Planning Policy Wales (Edition 11)

Planning Policy Wales

2.1. Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales.

2.2. Section 4 of PPW refers to Active and Social Places. The key themes in this section that are relevant to the proposed change of use are listed below:

“improve sustainable access to services, cultural opportunities and recreation facilities to support people to adopt healthy, culturally fulfilled lifestyles which will assist in improving health and wellbeing;

reducing reliance on travel by private car, and the adverse impacts of motorised transport on the environment and people’s health, by prioritising and increasing active travel and public transport; and

require developments to encourage modal shift and be easily accessible by walking, cycling and public transport, by virtue of their location, design and provision of on and off-site sustainable transport infrastructure.”

2.3. Paragraph 4.11 of PPW states that:

“Development proposals must seek to maximise accessibility by walking, cycling and public transport, by prioritising the provision of appropriate on-site infrastructure and, where necessary, mitigating transport impacts through the provision of off-site measures, such as the development of active travel routes, bus priority infrastructure and financial support for public transport services. Importantly, sustainable transport infrastructure and services should be prioritised and put in place from the outset, before people have moved in, and travel patterns have been established”.

2.4. **Figure 2.1** shows the sustainable transport hierarchy for planning as set out in Figure 9 of PPW.

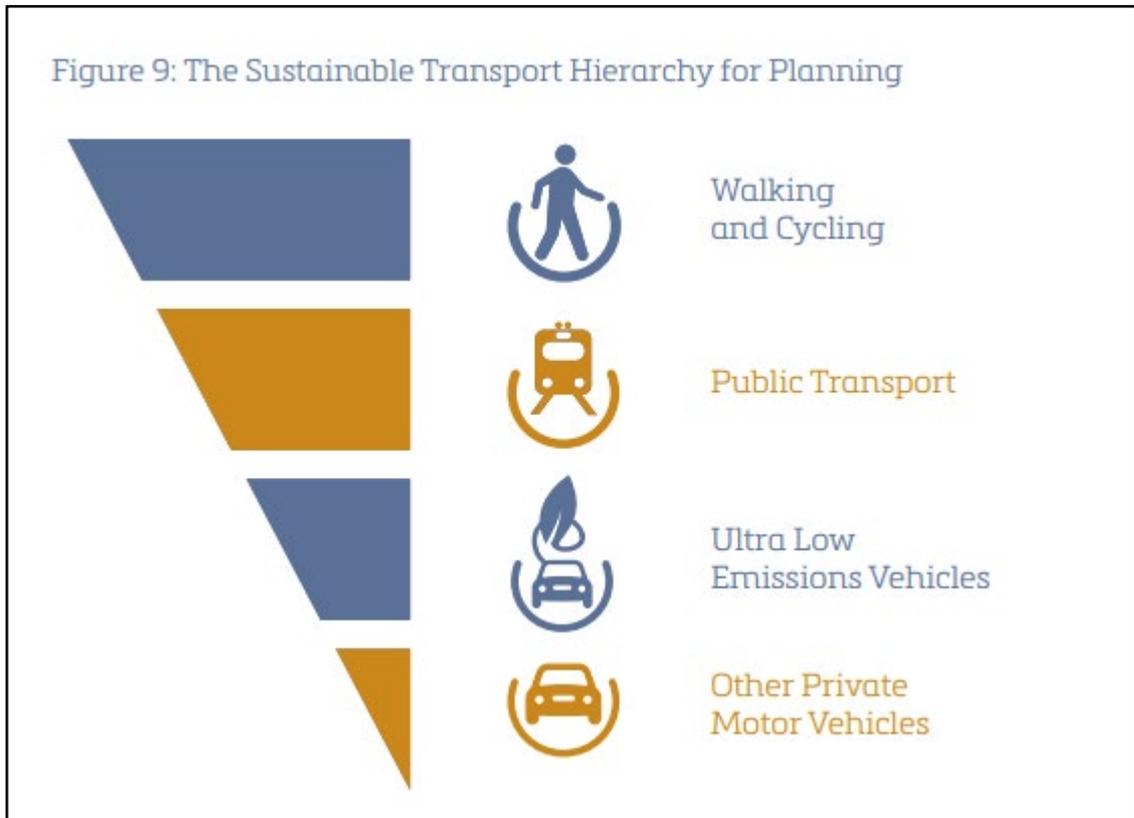


Figure 2.1 – Sustainable Transport Hierarchy for Planning

- 2.5. The proposed development is situated in an accessible location. There is good walking and cycling infrastructure adjacent to the site, with public transport services within acceptable walking distance.
- 2.6. The proposed development therefore accords with the general principles of the PPW.

Wales Transport Strategy

- 2.7. This strategy sets out the vision for how the transport system can help to deliver the priorities for Wales, helping to put Wales on a pathway to creating a more prosperous, green, and equal society. The three visions for the document are as follows:
- *“Bring services to people in order to reduce the need to travel;*
 - *Allow people and goods to move easily from door to door by accessible, sustainable and efficient transport services and infrastructure; and*
 - *Encourage people to make the change to more sustainable transport.”*

Planning Policy Wales , Technical Advice Note 18: Transport

2.8. Welsh Government Planning Policy Wales; TAN 18: Transport (2017) sets out how to integrate land use and transport planning and provides a framework for the assessment and mitigation of transport impacts. The note includes advice for transport related issues when planning for new developments, encompassing advice on location of development, parking and design of development, and walking, cycling and sustainable transport infrastructure. The Advice Note requires all applications for industrial use over 5,000 sqm gross floor area to be accompanied by a Transport Assessment. The aims of undertaking the Transport Assessment and establishing a Transport Implementation Strategy are to:

- *Understand the transport impacts of the development;*
- *Clearly communicate the impacts to assist the decision-making process;*
- *Demonstrate that the development is situated in a location that will produce a desired and predicted output;*
- *Mitigate negative transport impacts through the design process and (where applicable) secured through planning conditions or obligations;*
- *Maximise the accessibility of the development including by non-car modes; and*
- *Contribute to relevant development plan and Regional Transport Plan objectives relating to accessibility of services and modal share.*

North Wales Joint Local Plan 2015

2.9. Authorities in response to the Welsh Government requirement for LTPs to be submitted by the end of January 2015. The Plan is a statutory document for transport in the region and sets a detailed framework for 2015-2020.

2.10. The Vision of the Joint Local Transport Plan is to “remove barriers by delivering safe, sustainable, affordable and effective transport networks”. The LTP complements the work of the North Wales Ministerial Task Force and the Economic Ambition Board, together with the statutory plans and policies of each of the authorities.

- *The Plan aims to address the key issues for North Wales:*
- *The ability of the strategic road and rail corridors to provide the necessary good connectivity, for people and freight, within North Wales, to the ports and to the rest of the UK to support the economy and jobs, including tourism;*

- *The lack of resilience of the road and rail networks to planned and unplanned events including extreme weather;*
- *The need for good access to and between the three Enterprise Zones in North Wales;*
- *The lack of viable and affordable alternatives to the car to access key employment sites and other services; and*
- *The need for good road links to / from the trunk road network into the rural areas to help retain the viability of local businesses and support the Welsh language and culture.*

2.11. The site is situated within the Deeside region, which is considered by the North Wales Joint Transport Plan 2015 as an urban area.

2.12. The Plan aims to improve connections to key destinations and markets, enhance access to employment and services, increase levels of walking and cycling, bring improved safety and security and at the same time bring benefits and minimised impacts on the environment.

2.13. The Plan also follows the earlier Wales National Transport Plan, 2010 which set out interventions to strengthen the development of a sustainable transport system and that contribute to the Welsh Government's long-term aim for a decarbonised transport system in Wales. As aforementioned, the proposed site is well placed to make good use of the sustainable methods of travel (walking, cycling, and public transport) and is thus in line with national and local policy of prioritising sustainable travel.

Deeside Plan

2.14. The Deeside Plan sets out a vision for the growth of Deeside for 2015-2020 and beyond. It identifies the key strengths and weaknesses of Deeside and 5 core areas of improvement: Economic, transport, housing, skills, and employment, as well as environment.

2.15. On the issue of transport, the Deeside Plan states specifically that it aims to:

- *“Maximise the benefits of regional transport infrastructure investment;*
- *Use transport infrastructure investments to unlock further economic growth opportunities;*
- *Support modal shift from the private car to more sustainable patterns of movement;*
- *Develop solutions to reduce current congestion and ensure that transport, economic growth, and housing are considered in parallel to reduce negative impacts from future growth;*
- *Encourage active travel through green infrastructure corridors and investment in cycling and pedestrian infrastructure.” (emphasis added).*

- 2.16. Based on the above, it is considered that the Proposed Site will be in line with the objectives and aims of Deeside's Plan, due to its accessibility via existing public network and active travel method, as well as the great potential of the site to encourage the growth of these services.

The Flintshire Unitary Development Plan

- 2.17. Flintshire County Council are currently in the process of preparing a Local Development Plan for the County that will ultimately replace the policies contained within the adopted Unitary Development Plan. At the time of preparing this document, the Council was in the process of consulting on their Draft Local Development Plan, however this is unlikely to be adopted before late 2020. The Unitary Development Plan therefore contains relevant policies for decision making.
- 2.18. The Flintshire Unitary Development Plan (UDP) was formally adopted in September 2011, and acts as the basis of planning decisions within the county. The plan is comprised of two documents, the "written statement", and the proposals map.
- 2.19. Within the "written statement" of the UDP is divided into two sections. "Part I" contains the UDP's aims, strategy and strategic land use policies, while "Part II" contains detailed policies and site-specific proposals.
- 2.20. Within Part I, the following policies are considered relevant to the Proposals from a transport planning perspective:
- *STR1: "New Development", which requires development to be located "within existing settlement boundaries allocations, development zones, principal employment areas and suitable brownfield sites."*
 - *STR2: "Transport and Communications", which requires new development "wherever practicable" to minimise the use and the impact of the private car, and to enable the use of sustainable modes.*
- 2.21. Part II of the UDP contains several policies related to transport which are relevant to the Proposals. Most transport policies are contained in Chapter 10, "Access and Communications" and are as follows:
- *AC1: "Facilities for the Disabled", which states that "Development proposals will be permitted only if appropriate facilities are provided to meet the special needs of people with disabilities."*

- AC2: “Pedestrian Provision and Public Rights of Way”, which requires developments to have “safe direct and overlooked” pedestrian routes, “easily identifiable” routes to public transport facilities and local amenities, and sympathetic retention and integration of existing public rights of way.
- AC3: “Cycling Provision”, which requires development to provide safe and convenient access to the highway and existing/proposed cycle infrastructure, “easily identifiable” routes to public transport facilities and local amenities, and cycle parking and storage facilities.
- AC4: “Travel Plans for Major Traffic Generating Developments”, which states that developments which are likely to generate a substantial number of trips will require a travel plan.
- AC6: “Railway Stations”, which states that development at or near to stations should not affect or lead to a loss of station facilities.
- AC8: “Buses”, which requires, where appropriate, that development should be adequately serviced by public transport.
- AC13: “Access and Traffic Impact”, which states that “development proposals will only be permitted if approach roads to the site are of an adequate standard to accommodate the traffic likely to be generated by the development without compromising public safety, health and amenity; and safe vehicular access can be provided by the developer both to and from the main highway network.” This policy also notes that a Transport Assessment, incorporating a Traffic Impact Assessment, will be required by the Council “where considered necessary”.
- AC18: “Parking Provision and New Development”, which contains details of maximum car parking standards. The car parking standards applicable to the land uses proposed for the development are shown in Table 2.1.

2.22. In addition to the UDP Part II policies in Chapter 10, there are additional Part II policies which are relevant to the Proposals from a transport perspective:

- GEN1: “General Requirements for Development”, which, in relation to transport states that (i) “the development should not have an unacceptable effect on the highway network as a result of problems arising from traffic generation and should incorporate traffic calming measures where appropriate”; and (ii) “the development should have, where appropriate, convenient access to public transport, and wherever possible is well related to pedestrian and cycle routes”.

- *Policy EM1 “General Employment Land Allocations”, which sets out sites which will constitute the borough’s employment land supply within the UDP period, and which includes the development site, as “Land North West of Garden City”. It is noted under Policy EM1 that allocation is subject to the proposals “provides satisfactory on-site parking, servicing, and manoeuvring space and that the highway network (including access and egress) is adequate to safely cater for the type and volume of traffic generated by the proposal”.*
- *Policy EM3 “Development Zones and Principal Employment Areas” sets out that B1 business use, B2 general industry use, and B8 storage and distribution use “will be permitted” in the locations shown in the UDP proposals map, which includes the overall “Northern Gateway” area.*
- *Policy HSG2A “Strategic Mixed-Use Development: Land North West of Garden City” contains details of the allocation for the Site. The key transport elements noted within this are that the development should include “improved points of vehicular access to the site including the potential upgrading of the Drome Corner interchange to provide for a full grade separated interchange”, and “enhanced public transport provision and linkages to the site”. It is recognised under Policy HSG2A that the mixed-use nature of the development will achieve the objective of minimising the need to travel by car.*

2.23. The written statement of the UDP notes that the plan is intended to “work hand in hand with other corporate plans and strategies to achieve sustainable outcomes”, which includes the Local Transport Plan (LTP). Therefore, the following “common principles” with the LTP are established:

- Integrating Land use and Transport - The Local Transport Plan (LTP) through its aims and objectives, sets out the context for managing and tackling strategic and local transport issues. The LTP and the UDP share the common aim of reducing the need to travel (particularly by car), whilst at the same time promoting accessibility (through public transport) to jobs, services, and facilities.

Flintshire County Council Deposit Local Development Plan

2.24. The Flintshire Local Development Plan Deposit Draft was published in September 2019 and is currently under examination.

2.25. Emerging Policy PC5 Transport and Accessibility states that:

New development proposals must be supported by appropriate transport infrastructure, and depending on the nature, scale, location and siting of the proposal, will be required to:

- Reduce reliance on the car by incorporating more sustainable modes of travel first by walking and cycling, then by public transport and finally by private motor vehicle;
- mitigate any significant adverse effects upon the transport network that arise from the proposed development including improvements to transport infrastructure and traffic management where required;
- do not compromise the safe, effective and efficient use of the highway network and do not have an adverse impact on highway safety or create unacceptable levels of traffic generation;
- provide appropriate levels of parking, servicing and manoeuvring space and in non-residential development, a minimum of 10% of parking spaces to have electric vehicle charging points;
- create well designed people orientated streets and make provision for people with restricted mobility including those with characteristics as defined by the Equality Act 2010;
- safeguard, enhance and expand the active travel network, particularly by means of improving connectivity to and from the proposed development.

2.26. Under policy PC6 Active Travel it also states:

- the provision of appropriate walking and cycling routes being an integral part of the scheme and connecting the development with key destinations;
- the provision of infrastructure and facilities that promote walking and cycling such as signing, lighting, secure and convenient cycle storage and parking and where appropriate, shower and changing facilities;
- the provision of appropriate travel choice information relating to cycling and walking for all or part of journeys as part of Travel Plans;
- the incorporation of measures to reduce the dominance and speed of vehicles affording increased priority to pedestrians and cyclists;
- the development and enhancement of the Active Travel routes identified on the Integrated Network Map connecting communities to essential services including public transport, employment and education opportunities;
- the incorporation of existing public rights of way as an integral part of the design and layout of the development.

FCC Parking Standards

- 2.27. Parking requirements for new developments in Flintshire County Council are provided in the Supplementary Planning Guidance Note 11 adopted in January 2017. The parking requirements for cars and cycles is summarised in **Table 2.1** below.

Parking Standard	Receptors
Car Parking	B1 Business including offices parking space per 30sqm
	B2 General Industry – parking space per 50sqm
	B8 Storage Distribution car space per 100 sqm.
Cycle Parking	Administrative offices, research and development uses per 350m ² gross floor area (or part thereof)
	General industrial uses - per 500m ² gross floor area (or part thereof)
	Storage and distribution uses - per 1000m ² gross floor area (or part thereof)

Table 2.1 – FCC Parking Standards

Other Policies

Guidelines for the Environmental Assessment of Road Traffic, 1993

- 2.28. Guidance from the Institute of Environmental Assessment (IEA) is considered throughout this traffic and transportation Paper. The IEA is now known as the Institute of Environmental Management and Assessment (IEMA). The guidance document entitled “Guidelines for the Environmental Assessment of Road Traffic” has been used to inform the methodology of assessment.

3. Consultations

- 3.1. In the case of this application, Curtins has not undertaken a detailed ES Screening or Scoping Opinion Request to the Council. On this basis, Spawforths have previously sought to confirm with the Council by letter the information to be provided in the Environmental Statement, in accordance with Part 4 (13) of the EIA Regulations, to ensure the scope of the technical chapters and the methodology for assessing the significance of effects is robust.
- 3.2. The Council subsequently confirmed that they accepted this approach and methodology including the range of environmental issues against which the Proposals should be assessed as part of the Environmental Impact Assessment process. A copy of the Council letter confirming this is attached at Appendix 14 of the Part I Report of this ES.
- 3.3. The information presented in this Technical Paper and the TA (Appendix 2.1) has been prepared following consultation with Highways Officers at Flintshire County Council (FCC) and the Welsh Assembly Government (WAG).

Theme / Issue	Date	Consultee	Method	Summary of Discussion	Outcome / Output
Pre- App Meeting	09.08.21	FCC	Meeting	To agree a suitable scope of assessment and identify key issues	Agreement reached on scope but request for scoping Note to be issued to Council
Highways Scoping Report	17.09.21	FCC	Technical Note	To agree a suitable scope of assessment for the Transport Assessment, Travel Plan and ES Paper.	Issued to FCC 17.09.21

Table 2.2 – Summary of Consultations and Discussions

4. Methodology and Approach

- 4.1. The methodology for the Environmental Statement is in accordance with the Institute of Environmental Management and Assessment (IEMA) method set out in the document 'Guidelines for the Environmental Assessment of Road Traffic' 1993.
- 4.2. The IEMA guidelines recommend that the environmental effects listed in Table 2.1 of the guidance may be considered important when considering traffic from an individual development. These effects include:
- Noise;
 - Vibration;
 - Visual Impact;
 - Severance;
 - Driver delay;
 - Pedestrian delay;
 - Pedestrian amenity;
 - Accidents and safety;
 - Hazardous loads;
 - Air pollution;
 - Dust and dirt;
 - Ecological impact; and
 - Heritage and conservation.
- 4.3. Of these effects, many are considered in Papers elsewhere in this ES due to the specialist skills required; namely noise, vibration, visual impact, air pollution, ecological effects and heritage and conservation.
- 4.4. With regard to the remaining effects the guidance states that the following rules should be used as a screening process to delimit the scale and extent of the assessment:
- “Include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%); and
 - Include any other specifically sensitive areas where traffic flows have increased by 10%, or more.”

- 4.5. Increases in traffic flows of less than 10% are generally accepted as having negligible impact as daily variance in traffic flows can be of equal magnitude.
- 4.6. The 30% threshold relates to the level at which humans may perceive change and there may therefore be an effect. Impacts above this level therefore do not suggest that there is a significant impact, only that further consideration is required.
- 4.7. In addition to the IEMA guidance, Curtins has a long-standing involvement in this Site and numerous consultations with relevant stakeholders to determine the geographical scope, in terms of highway links and junctions likely to be impacted and the vehicle trips associated with the Proposed Development.
- 4.8. The stakeholders include Flintshire County Council and the Welsh Assembly Government (WAG).

Transport Assessment

- 4.9. To determine whether the traffic flows at the junctions listed in Section 5 of this Paper exceed the 10% or 30% threshold, the assessments carried out within the TA have been referred to. The TA includes:
- 4.10. An assessment of the local highway network in the vicinity of the Site; the geographic study area consisting of the junctions described later in this report; and
- 4.11. Consideration of the development traffic generation and distribution.

Travel Plan

- 4.12. A framework Travel Plan has been prepared, this TP will:
- Identify the objectives of the TP and how it will link with the occupiers of the Site;
 - Provide targets which will need to be achieved and maintained to reduce the overall traffic and transportation impact of the Site;
 - Identify the measures and initiatives to achieve the objectives of the TP to increase travel to the Site sustainably: on foot, by cycle and/or using public transport;
 - Provide details of how the TP will be marketed for staff and visitors;

- Set out realistic and achievable preliminary targets for reducing travel to Site by private car and identify specific timescales to be agreed with the local authorities; and
- Derive a monitoring schedule to assess the effectiveness of the TP.

4.13. The TP is a live document that applies throughout the lifecycle of the project.

Detailed Assessments

4.14. Using the findings of the assessments outlined above, any links with a predicted increase above 30% will be assessed in accordance with IEMA guidelines. As mentioned previously this will include consideration of:

- Severance;
- Driver delay;
- Pedestrian delay;
- Pedestrian amenity; and
- Accidents and safety.

Severance

4.15. Severance is a perceived division that occurs when a traffic link separates part of an existing community. This can occur when a road becomes too heavily trafficked (making crossing the road a problem) or when a new route divides existing land creating a physical barrier.

4.16. The Guidelines for Environmental Assessment of Road Traffic states that:

“The measurement and prediction of severance is extremely difficult. The correlation between the extent of severance and the physical barrier of a road is not clear and there are no predictive formulae which give simple relationships between traffic factors and levels of severance.”

4.17. The following indicators are set out in the Guidelines:

- 30% flow increase – slight separation effects
- 60% flow increase – moderate separation effects
- 90% flow increase – substantial separation effects

- 4.18. These indicators along with consideration of a number of factors including road width, traffic speeds, crossing facilities and existing crossing provision have been used to form the basis of the criteria against which the assessment has been carried out in this Technical Paper.

Driver Delay

- 4.19. Changes in delay to drivers have been considered throughout the accompanying TA at all junctions using industry standard software packages. These programs give output ratios of flow to capacity (RFC), degrees of saturation (DoS) and queue lengths which give an indication of the overall operational capacity of the junctions.

Pedestrian Delay and Amenity

- 4.20. A change in vehicular demand affects the ability of pedestrians to cross local routes, which results in an impact on delay and on an individual's desire to make a particular walking journey.
- 4.21. Changes in the volume, speed or composition of traffic and the physical condition at crossing points affect pedestrian amenity.
- 4.22. Pedestrian delay and amenity is not precisely defined but should be made with 'knowledge of local factors and conditions'.

Fear and Intimidation

- 4.23. Fear and intimidation can also increase as a result of rising traffic flows. This is influenced by several things including the volume of traffic, HGV content, nature and frequency of cycle infrastructure, and the width of the footpath.
- 4.24. In addition, The Guidelines for Environmental Assessment of Road Traffic gives the following example of fear and intimidation thresholds:

Degree of Hazard	Average Traffic Flow over 18hr Day (Vehicles/hour)	Total 18 hr HGV Flow	Average Speed over 18 hr Day (mph)
Extreme	1,800 +	3,000 +	20 +
Great	1,200 – 1,800	2,000 – 3,000	15 – 20
Moderate	600 – 1,200	1,000 – 2,000	10 – 15

Table 2.3– Fear and Intimidation Thresholds

4.25. The above thresholds have been used to assess fear and intimidation alongside a professional understanding and appreciation of the existing baseline conditions.

Accidents

4.26. The Guidelines for Environmental Assessment of Road Traffic states that:

“From knowing the expected increase in vehicle-kms on different classes of road, it will be possible to make an initial simple statistical assessment of the likely increase or decrease in the number of accidents resulting from changes in traffic flows and composition.”

4.27. Notwithstanding the above, the methodology used to calculate accident likelihood is no longer fit for purpose and therefore the TA/ES provides a detailed review of collision records to consider any implications on highway safety.

Receptors

4.28. The potential groups that may be affected by an increase in traffic would be at a Borough and Local/Neighbourhood level and could include:

- Existing commuter traffic on the local highway network, notably at;
 - A548 Shotwick Road/Parkway (roundabout);
 - DIP Interchange (grade separated roundabout);
 - Drome Corner eastern dumb-bell (roundabout);
 - Drome Corner western dumb-bell (roundabout);
 - Chester Road/B5441 Welsh Road/ASDA Access (signals); and
 - A550/A494 (grade separated roundabout).
- Local residents within Garden City and on the B5441 Welsh Road.
- Local residents in neighbouring areas such as Queensferry and Connah’s Quay.
- People walking on Site and the surrounding highway network, notably Welsh Road.

- People cycling on Site and the surrounding highway network, notably Welsh Road.
- Open spaces and recreational areas.

4.29. The potential receptors are summarised in **Table 2.4** below and shown on the Receptors Plan which can be found in Appendix 2.3.

Designation	Receptors
International	None
National	None
Regional	None
County	None
Borough / District	Congestion/Delays on the highway network
Local/Neighbourhood	Local residents at Garden City and Welsh Road Sealand Primary School Local highway users including pedestrians, cyclists, and vehicles Open Space

Table 2.4 – Potential Receptors

4.30. **Table 2.4** shows that there are no international, national, or regional receptors close to the Proposed Development. The local/ neighborhood receptors would be residential housing, existing traffic on the local highway network in the vicinity of the Site, Pedestrians and cyclists on the local highway network, public transport users in the vicinity of the Site. The previously mentioned receptors will be assessed by their allotted designation level to assess their environmental impacts.

Environmental Impacts

4.31. For those links that exceed the 30% threshold mentioned above and in addition to the assessment methodologies set out in the previous section, the magnitude and environmental impacts will also be cognisant of the parameters put forward in the scoping note and as presented in Table 2.5 below.

Magnitude	Environmental Impact
Major	Construction – High number of construction vehicles over a protracted period (30% to 34% increase) Operational – Sustainable Travel – Limited access to sustainable modes of travel Operational – HGVs – High number of HGVs on a permanent basis (30% to 34% increase) Operational – Traffic – High number of cars on a permanent basis (30% to 34% increase)

Magnitude	Environmental Impact
Moderate	Construction – Moderate number of construction vehicles over a protracted period (15% to 29% increase) Operational – Sustainable Travel – Some access to either walking, cycling or public transport but not all three Operational – HGVs – Moderate number of HGVs on a permanent basis (15% to 29% increase) Operational – Traffic – Moderate number of cars on a permanent basis (15% to 29% increase)
Minor	Construction – Small number of construction vehicles over a protracted period (6% to 14% increase) Operational – Sustainable Travel – Some access to walking, cycling and public transport facilities Operational – HGVs – Small number of HGVs on a permanent basis (6% to 14% increase) Operational – Traffic – Small number of cars on a permanent basis (6% to 14% increase)
Negligible	Construction – Occasional access required (less than 5% increase) Operational – Sustainable Travel – Dedicated access to walking, cycling and public transport facilities Operational – HGVs – Immaterial number of HGVs on a permanent basis (less than 5% increase) Operational – Traffic – Immaterial number of cars on a permanent basis (less than 5% increase)
Neutral	No change

Table 2.5 – Environmental Impacts

- 4.32. Some of the above parameters are subjective; for robustness, the worst-case scenario will be taken initially with due consideration of the realistic and practical range of impact.

Significance of Effects

- 4.33. The significance of effect is determined using the significance matrix in Section 6 of the Environmental Statement Part I Report. This identifies the receptor level across the top of the matrix and the magnitude of environmental impact down the side and where they meet within the matrix identifies the significance of the effect.

Impact Prediction Confidence

- 4.34. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

Table 2.6 – Confidence Levels

5. Baseline Information

- 5.1. Baseline conditions for the existing Site and the surrounding area are considered below with regard to traffic flows, accessibility, and safety.
- 5.2. The Site is currently open, undeveloped agricultural land, and forms part of the Airfields Site which is part of the wider Northern Gateway Northern Gateway Strategic mixed-use allocation.
- 5.3. The Application Site Boundary relates to an area of land of approximately 23.74 hectares (58.67 acres) in extent and forms part of the former RAF Sealand ‘South Camp’ site, now referred to as the Airfields, which forms part of the Northern Gateway Strategic Mixed Use Development site allocated under Policy HSG2A in the Flintshire UDP (2011). Outline planning permission (ref: 049320) was granted for an employment led mixed use development in January 2013 and subsequently varied with the last Section 73 application approved in April 2021 (ref: 061125).
- 5.4. The Application Site occupies the north western part of the Airfields site.
- 5.5. Beyond the eastern and southern boundaries of the Application Site will be the Welsh Government’s proposed Commercial Spine Road, Roads 2 and 3. A recent reserved matters application has been made to FCC to secure the approval for this road (Application ref: 063191 and 063187).
- 5.6. This new road which will connect into the completed Road 1 constructed by Welsh Government which takes access from Welsh Road will provide a public transport link into the Deeside Industry Park and link the Airfield site with the adjacent former Corus Garden City site delivering a comprehensive mixed-use development which will meet with the policy objectives of the Northern Gateway Strategic Mixed Use Development site allocated under Policy HSG2A in the Flintshire UDP (2011).
- 5.7. The Application Site extends to the south onto the former Corus Garden City site owned by PGNGL.

Locus Highway Network

Corus Access Road

- 5.8. This is a single carriage two-way road and runs an east west alignment. The road is approximately 2.5km long and extends between B5411 Welsh Road to the east and River Road to the west.

- 5.9. In the vicinity of the Proposed Development Site, the road has three lanes with two lanes running in the west-east direction towards the B5441 Welsh Road and one lane running in the east west direction. There are no formal footways on both sides of the carriageway, however there is a grass verge located to the south of the carriageway which could be utilised by pedestrians.
- 5.10. The road forms a priority junction with Welsh Road. It is intended as part of the enabling works for the PGNGL Site to improve this by shared footway/cycle along this road to connect to the existing facilities on Welsh Road. These enabling works have now secured approval under a reserved matters application.

B5441

- 5.11. The B5441 is a single carriageway road that runs parallel to the A494 along the south-east edge of the Site. The route forms part of the Welsh Road Bridge and passes through a residential area in the immediate vicinity of the Site, subject to a speed limit of 20 mph.
- 5.12. There is good pedestrian infrastructure along the road with wide footways located on both sides of the carriageway. There are also advisory cycle lanes on both sides of the carriageway. The footways and cycle lanes are clearly signed. There is streetlighting along the road as well as bus stops with shelters.
- 5.13. The National Cycle Route (NCR 563) runs along the B5441, ensuring good facilities for cyclists and facilitating sustainable modes of travel.

A494

- 5.14. The A494 is a trunk road that runs to the south-east of the Site. The route, which is officially known as the Dolgellau to South of Birkenhead Trunk Road, runs between the terminus of the M56 motorway between Mollington and Capenhurst and the A470 at Dolgellau, Gwynedd.

Highway Safety

- 5.15. Personal Injury Accident (PIA) data for the highway network adjacent to the site has been obtained from the CrashMap website (www.crashmap.co.uk) for the most recent five years (2016 – 2020 inclusive). **Table 2.7** provides a summary of the highway safety record for the study area.

Junction/Link	Slight	Serious	Fatal	Total
Drome Corner Roundabout	0	1	0	1
Corus Access/B5411 Welsh Road	0	0	0	0
Farm Road/B5411 Welsh Road/Fox Drive	1	0	0	1
B5411 Welsh Road/Riverside Park	2	0	0	2
Sealand Avenue/Sandy Lane	0	1	0	1
A494	2	0	0	2
Fox Drive	0	0	0	0
Totals	5	2	0	7

Table 2.7 – Highway Safety

- 5.16. **Table 2.7** confirms that there have been 7 accidents in the study area during the five-year study period, comprising 5 slight severity accidents and 2 serious severity accidents. There were no fatal accidents recorded in the study area throughout the study period.
- 5.17. For the two serious accidents one occurred at the at the Drome Corner roundabout on the A494 northbound slip road approach. This accident involved three vehicles (two cars and one goods vehicle), with all vehicles travelling normally along the road. The other serious accident occurred at the Sandy Lane/Sealand Avenue junction. This accident involved a car and pedal cyclist. The car was moving off and hit the cyclist proceeding normally along the road.
- 5.18. A review of the above accidents does not identify any trends or clusters that could be attributed to the existing highway layout or design.
- 5.19. On the above basis, it is not considered that there is an existing safety issue that is likely to be exacerbated by the Proposed Development.

Traffic Flows

- 5.20. It was agreed during scoping discussions that the approved traffic envelope for wider Northern Gateway Site, for which the Proposed Development forms a part is the base position and that the ICT UK Ltd Paper Mill Facility has been established and accepted by Highways Officers as part of the outline planning permission already granted.

Approved Airfields Traffic

5.21. The total traffic associated with the Outline Application is for the CHEL site is summarised below:

Land Use	AM Peak			PM Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
A1 Retail	114	103	217	135	139	274
B1 Office	131	17	148	16	107	123
B2 Industrial	54	11	65	6	46	52
B8 Warehousing	98	55	154	49	88	137
Sui Generis	49	18	66	20	43	63
C3 Residential	104	320	423	272	148	420
Total	550	523	1074	498	572	1070

Table 2.8– Approved CHEL Traffic

5.22. **Table 2.8** shows that the outline approval for the CHEL Site has a traffic envelope of 1074 two-way traffic movements in the AM peak and 1070 two-way movements in the PM peak.

Approved PNGGL Traffic

5.23. The total traffic associated with the approved Outline Application for the PNGGL Site is summarised below:

Land Use	AM Peak			PM Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
A1 Retail (2500sqm)	61	55	117	73	75	147
B1 Office (3300 sqm)	57	7	65	7	47	54
B2/B8 (127400sqm)	308	131	439	115	279	393
Hotel (3000 sqm)	10	15	25	15	12	27
Residential (770)	110	340	450	289	157	446
Total	546	548	1096	499	570	1067

Table 2.9 – Approved PNGGL Traffic

5.24. **Table 2.9** confirms that the total traffic approved traffic for the PNGGL development is 1096 two-way movements in the AM peak and 1067 two-way movements in the PM peak.

Enabling Works – Development of Road 2 and Road 3 Vehicle Access

- 5.25. Applications for Approval of Reserved Matters relating to access for Roads 2 and 3 of the highway works and associated infrastructure works (Application ref: 063191 and 063187) and discharge of condition No. 27 (Details of Traffic Impact Statement) attached to Planning Permission reference: 058990 (application ref: 063186) have been recently submitted to Flintshire County Council.
- 5.26. ARCADIS produced a Transport Technical Note in support of the above application. The proposed works consists of 5 junctions and 3 highway sections. Tables 2.10 and 2.11 below summarises the CHEL Site traffic and PGNGL Site traffic assessed as part of the assessment for Roads 2 and 3.

Land Use	AM Peak			PM Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
Plot B-50534 sqm	22	13	35	11	19	30
Plot C - ICT	121	22	143	25	125	150
Plot D- 23442	10	5	16	5	9	14
Total	153	40	195	41	153	194

Table 2.10 – CHEL Site Traffic for Roads 2 and 3 Assessment

- 5.27. Table 2.10 confirms that the assessments for the Phase 2 and 3, highway works was based on 143 two-way traffic movements in the AM peak and 150 two-way movements in the PM peak for the ICT site.

Land Use	AM Peak			PM Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
A1 – Retail	61	55	117	73	75	147
B1 – Office	57	7	65	7	47	54
B2 – Industrial	159	33	192	18	136	155
B8 – Warehousing (Medium)	68	34	102	35	68	103
B8 – Warehousing (Large)	43	29	72	34	48	82
C1 – Hotel	10	15	25	15	12	27
Total	398	173	573	182	386	568

Table 2.11 – PGNGL Traffic for Roads 2 and 3 Assessment

- 5.28. As part of the Roads 2 and 3 assessment works, capacity assessments of the two junctions of the internal spine road with Welsh Road has been undertaken. This confirmed that the junctions have sufficient capacity to accommodate all the traffic associated with the Northern Gateway site.

6. Alternatives Considered

- 6.1. A series of alternatives have been considered as part of the evolution of the Proposals. These are documented within Section 4 of the ES Part 1 Report, identifying how environmental considerations have influenced the Proposals.
- 6.2. The alternatives have predominantly focused upon the on-site evolution of the scheme, with off-Site traffic and transport considerations remaining largely similar throughout.

7. Potential Environmental Effects

- 7.1. The TA has assessed the potential traffic impact of the Proposed Development, including the total development that has been approved as part of the outline permissions for the wider Northern Gateway Site including the Airfields and former Corus Garden City Sites.
- 7.2. The potential effects during each phase will be considered in this section and if the traffic flow on any link exceeds the 30% threshold set out in the IEMA guidance additional assessments will be undertaken to consider:
- Impact on severance;
 - Impact on driver delay;
 - Impact on pedestrian delay and amenity;
 - Impact on fear and intimidation; and
 - Impact on accidents and road safety.
- 7.3. The following sections outline the potential impacts of the Development Proposals on each of the environmental factors outlined above.
- 7.4. Different traffic impacts may occur at different phases of development on the Site. Therefore, consideration has been given to impacts during the construction and operational phases of development.

Construction Phase

- 7.5. The construction of the Proposed Development will result in an increase of Heavy Goods Vehicles (HGVs) and cars belonging to construction workers accessing the Site. Construction traffic is likely to access the Site via Welsh Road. The construction details are set out in the project description contained in the ES Part I Report and makes certain assumptions relating to the HGV movements associated with construction activities including the importation of fill associated with the cut and fill enabling works.
- 7.6. Given the scale and nature of the project a Construction Environmental Management Plan (CEMP) will be implemented. This will identify a list of control procedures, which specify legislation, standards and best practice methods which would be adhered to during construction works. It is also noted that wheel washing facilities would be employed to minimise mud/dirt on the highway.

- 7.7. There will be an increase in car parking associated with employees and sub-contractors, however it is not expected to affect adjacent streets to the Site and that all parking related to workers and vehicles will be contained within the Site. While there will be an increase in HGV movements to Site, it is considered that these will not be severe as the majority of the construction plant will be stored within the Site. The CEMP will have to demonstrate and confirm this is the case.
- 7.8. Based on the estimated construction details provided by ICT UK Ltd and HGV movements associated with importation of fill, it is considered that the volume of construction traffic when compared to the existing traffic flows on the highway network would not represent a long term-significant increase and would be below the 10% to 30% increase in traffic set out in the IEMA ‘Guidelines for the Environmental Assessment of Road Traffic’.
- 7.9. On this basis, the impacts are unlikely to be significant and no detailed assessment of severance, driver delay, pedestrian delay, fear and intimidation and accidents are necessary. It is considered that the impacts associated with the construction of the Proposed Development will be temporary in nature and would lead to a temporary minor adverse impact on local receptors.
- 7.10. This is consistent with the impacts identified as part of the consented development scheme, outlined in the original ES and Addendum. The significance of effects on the construction phase is summarised in **Table 2.12** below:

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Increase in HGV traffic flows may impact on driver delay due to construction traffic.	Local/ Neighbourhood	Minor Negative	Negligible/Minor Adverse	High
The HGVs associated with the construction process may result in increased dust and dirt.	Local/ Neighbourhood	Minor Negative	Negligible/Minor Adverse	High
Increase in HGV traffic flows on the local highway network may impact on severance, driver delay, pedestrian amenity, fear and intimidation, and road safety.	Local/ Neighbourhood	Negligible	Negligible	High

Shift Time	Phase			Total
	Phase 1	Phase 2	Phase 3	
0600-1400	54	10	46	110
1400-2200	53	11	46	110
2200-0600	50	10	44	104
0800-1700	72	11	15	98
Total	229	42	151	422

Table 2.13 – Phase and Number of Staff

- 7.16. It is evident from **Table 2.13** that majority of the shift changes occurs outside the traditional AM and PM peak hours. For the purpose of this assessment, it has been assumed that the staff who work 0800-1700 will arrive during the AM peak and depart during the PM peak. Table 2.10 confirms that 98 people work during this period.
- 7.17. To derive the modal share of people travelling to the Site, Curtins has used journey to work by mode data based on the 2011 census from the output area “Flintshire 007 and 008”. The output areas used is highlighted in **Figure 2.2** below.

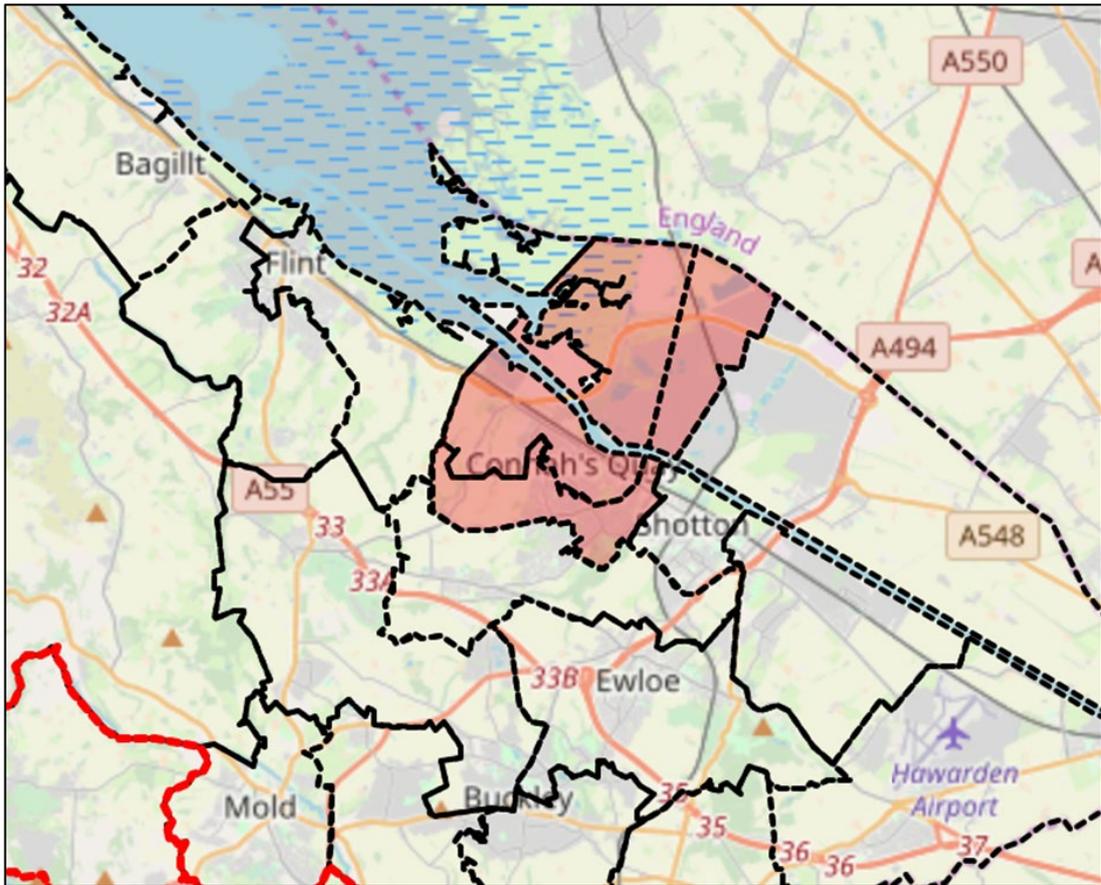


Figure 2.2 – Employment Zones Used for Mode Share Derivation

7.18. The data extracted from the output areas is summarised in **Table 2.14** below.

Number of People	Flintshire 007	Flintshire 008	Total
	Number of People	Number of People	
Underground, metro, light rail or tram	1	4	5
Train	5	66	71
Bus, minibus, or coach	69	490	559
Taxi	23	47	70
Motorcycle, scooter or moped	19	116	135
Driving a car or van	1226	8655	9881
Passenger in a car or van	117	909	1026
Bicycle	51	318	369
On foot	197	587	784

Number of People	Flintshire 007	Flintshire 008	Total
	Number of People	Number of People	
Other method of travel to work	0	30	30
Total	1708	11222	12930

Table 2.14 – Mode of Travel to Work

- 7.19. The mode of travel has been further refined by combining the travel by tram, train, and bus/coach as public transport. For a robust assessment, the taxi and other method of travel to work category has been added to the car driver category. The resulting mode share for each mode of travel has been derived and summarised in **Table 2.15**.

Mode	Number of People	Percentage
Public Transport	635	5%
Car Driver	9981	77%
Motorcycle, scooter or moped	135	1%
Passenger in a car or van	1026	8%
Bicycle	369	3%
On foot	784	6%
Total	12930	100%

Table 2.15 – Derived Mode Share

- 7.20. Using the above mode share, the likely staff traffic for each phase has been summarised in **Table 2.16** below.

Mode	Phase 1	Phase 2	Phase 3	Total
Public Transport	4	1	1	5
Car Driver	55	8	12	75
Motorcycle, scooter or moped	1	0	0	1
Passenger in a car or van	6	1	1	8
Bicycle	2	0	0	3
On foot	4	1	1	6
Total	72	11	15	98

Table 2.16 – Staff Mode Share per Phase

- 7.21. **Table 2.16** confirms that there will be circa 75 vehicles arriving at the Site in the AM peak and departing the Site in the PM peak when fully completed. It is evident from **Tables 7.4** and **7.5** that

the majority of employees will be arriving and departing the Site by car and that the combination of car drivers and car occupants accounts for approximately 85% of employee travel.

HGV Movements

7.22. ICT UK Ltd has provided the likely daily HGV movements associated with the Proposed Development. This is summarised in **Table 2.17** below for all the development phases.

HGV	Phase 1	Phase 2	Phase 3
Good receipt from vendor/harbour of pulp	12	25	37
Good receipt from vendor of raw materials PM	1	2	2
Shipping of jumbo for B2B customer	6	6	7
Intercompany goods receipt of jumbo	16	0	0
Good receipt of empty pallet	8	8	16
Good receipt from vendor of RM Converting	5	5	10
Other truck	2	3	5
Shipping of finished goods from HBW and TW	65	65	106
Total Daily	115	114	183
Hourly HGV Movements (12 Hour Day)	10	10	15

Table 2.17 – Staff Mode Share per Phase

7.23. **Table 2.17** confirms that Phase 1 will generate 115 (230 two-way) HGV trips to the Site per day with Phases 2 and 3 generating 114 (230 two-way) and 183 (366 two-way) HGV trips respectively. Table 2.14 also demonstrates that the Proposed Development could generate up to 366 HGV movements per day when fully completed. Whilst the Site is going to be operational for 24 hours a day, for the purpose of this assessment it has been assumed that the above HGV movements will occur over a 12-hour period.

7.24. For the purpose of this assessment, it has been assumed that the above HGV movements will occur over a 12-hour period. Dividing the total HGV movements by 12 indicates the Proposed Development will generate 10 HGV movements in Phase 1, 10 in Phase 2 and 15 in Phase 3 for both the AM and PM peak hour. For the purposes of this assessment, it has been assumed that HGV trucks will enter and exit the Site within the same hour.

7.25. On the above basis the potential vehicle trips associated with the Proposed Development for each phase are summarised in **Table 2.18**.

	LGV			HGV		
	Arrive	Depart	Total Vehicles	Arrive	Depart	Total Vehicles
Phase 1						
AM Peak	55	0	55	10	10	20
PM Peak	0	55	55	10	10	20
Phase 2						
AM Peak	8	0	8	10	10	20
PM Peak	0	8	8	10	10	20
Phase 3						
AM Peak	12	0	12	15	15	31
PM Peak	0	12	12	15	15	31
Total Development						
AM Peak	75	0	75	15	15	31
PM Peak	0	75	75	15	15	31

Table 2.18 – Total ICT UK Ltd Development Traffic per Phase

- 7.26. Adopting the trips specific to the ICT UK Ltd Paper Mill Facility, the total traffic associated with the Northern Gateway Site granted outline permission is summarised in **Table 2.19** below.

Uses (GFA)	AM Peak			PM Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
A1 Retail (2500sqm)	61	55	117	73	75	147
B1 Office (3300 sqm)	57	7	65	7	47	54
B2/B8 (127400sqm)	39	10	49	5	32	37
ICT	90	15	106	90	15	106
Hotel (3000 sqm)	10	15	25	15	12	27
Residential (770)	110	340	450	289	157	446
Total	367	442	812	479	338	817

Table 2.19 – Total ICT UK Ltd Development Traffic

- 7.27. **Table 2.19** confirms that when the ICT UK Ltd specific traffic is considered, the cumulative traffic of the Northern Gateway Sites (Airfields and Former Corus Garden City) granted outline planning permission is less than the approved traffic envelope for the Application Site.

- 7.28. As the impact of approved development has already been agreed and approved, this assessment has been undertaken on the basis that the traffic associated with the proposed CHEL Airfields Site and

the approved outline scheme on the former Corus Garden City Site is already committed and therefore part of the base scenario.

7.29. On this basis, it is not considered any further assessment of the local highway network is required.

Highway Operation

7.30. As part of the planning application for the approved Airfields development granted in outline (Ref: 049320), capacity assessments of the following junctions were undertaken for both the AM and PM peak hour periods to consider the future highway operation, up to 2022 following completion of the approved development.

- A548 Shotwick Road/Parkway (roundabout);
- DIP Interchange (grade separated roundabout);
- Drome Corner eastern dumb-bell (roundabout);
- Drome Corner western dumb-bell (roundabout);
- Sealand Avenue/B5441 Welsh Road (priority);
- Farm Road/B5441 Welsh Road (priority);
- Corus Access/B5441 Welsh Road (priority);
- Chester Road/B5441 Welsh Road/ASDA Access (signals); and
- A550/A494 (grade separated roundabout).

7.31. It was identified, through detailed traffic modelling and junction analysis, the requirement for infrastructure improvements at the following junctions in order to mitigate the traffic impact of the approved outline scheme on behalf of CHEL:

- A548 Shotwick Road/Parkway (roundabout);
- DIP Interchange (grade separated roundabout);
- Drome Corner eastern dumb-bell (roundabout);
- Drome Corner western dumb-bell (roundabout);
- Chester Road/B5441 Welsh Road/ASDA Access (signals); and
- A550/A494 (grade separated roundabout).

7.32. The impact of the approved development at these junctions were considered to be Minor Adverse. Following planning approval FCC have implemented improvement schemes at the Station Road/ASDA Access signal junction and the Queensferry Interchange.

7.33. As demonstrated above, the impact of the proposed ICT UK Ltd Proposed Development on the highway network has already been considered as part of the approved outline planning application traffic. This assessment demonstrated that the mitigation identified for the above junctions as part of the approved CHEL outline development would have sufficient capacity to accommodate all the traffic associated with the Proposed ICT UK Ltd Proposed Development.

Accessibility and Pedestrian Amenity

7.34. A key element of the Development Proposals is to encourage sustainable modes of travel. These proposals include:

- A shared foot / cycle path along the length of the re-aligned spine road;
- Pedestrian and cycle provision within the detailed Site layout; and
- Utilising the design of the Spine Road to allow bus penetration into the Site and provide linkages through the wider Northern Gateway Site.

7.35. Further details are provided in the TA.

Pedestrian Delay and Amenity

7.36. In relation to pedestrian and cycle access, the internal layout of the site has been designed to be permeable to both pedestrian cyclists. It is intended to connect the proposed footways within the site to the shared footway/cycle that will be constructed along the spine road as part of the wider enabling works package.

7.37. In addition to the above, the internal Spine Roads and Site access strategy has been developed in such a way to reduce the level of traffic required to travel along Welsh Road, in particular along the frontage of Sealand Primary School and local shops.

7.38. It is intended that vehicles arriving at the site from the north will turn right in and left out of the northern Welsh Road/Spine Road junction. As part of the access strategy, it is envisaged that the commercial HGV traffic will access and egress the site through the Airfields Site.

7.39. This will assist in creating a safer pedestrian environment for users of the Site, local residents, and school children.

Severance

- 7.40. The proposed Site access has a significant bearing on the direction of vehicles approaching and leaving the Site.
- 7.41. As a direct result of the access locations into the proposed Site off Welsh Road, the level of development related traffic travelling along Welsh Road between the Corus access junction and the Drome Corner roundabout is significantly reduced. This would benefit local residents and reduce the potential severance effects that high traffic flows along Welsh Road could create.

Further Accessibility Benefits

- 7.42. Accessibility by bicycle will be enhanced the shared footway/cycleway proposed along the internal Spine Roads.
- 7.43. Cyclists would also be able to benefit from the existing network of cycle routes which run within close proximity of the Site.
- 7.44. It is considered that the dedicated cycle facilities, existing and proposed, would reduce the potential conflict between vulnerable highway users and vehicular traffic thus providing a less intimidating environment for pedestrians and cyclists.
- 7.45. Secure, covered cycle parking facilities will also be provided on Site.
- 7.46. In addition to the above, as mentioned previously the proposed access strategy (referred to in paragraph 7.38 above) has been developed to assist in diverting traffic away from Welsh Road and in particular the frontage with the primary school.
- 7.47. A Travel Plan will also be implemented to encourage sustainable modes of travel. The Travel Plan will promote travel by walking, cycling and public transport and seek to reduce the reliance on private car travel.
- 7.48. The most easily identifiable benefits of a Travel Plan are those that are directly related to reductions in vehicle use; namely less congestion, noise, air pollution and road accidents. However, there is also a broader range of more intangible benefits that can occur from the implementation of a Travel Plan including.

- Improved health (i.e., increased fitness and reduced stress and obesity);
- A reduction in travel costs;
- A cleaner local environment;
- Improved accessibility to local services;
- Increased road safety;
- Reduced travel times;
- Improved travel choice;
- Reduced congestion and demand for parking spaces; and
- A reduction in the need to travel.

7.49. Based on the above measures the development is considered to have a long-term minor benefit on accessibility.

Accidents and Safety

7.50. It is acknowledged that the Proposed Development will increase traffic flows on the surrounding highway network. However, it is not envisaged that this would exacerbate any existing safety issues.

7.51. Taking all the above into consideration, the Proposed Development, including the total development mix approved with the outline for the wider CHEL Airfields Site is believed to have a negligible impact with regard to highway safety. The Proposed Development does not result in any changes to the significance of effects from that assessed as part of the original ES and ES Addendum submitted with the original Northern Gateway outline permissions for both the Airfields and Former Corus Garden City Sites.

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Accidents and Safety	Local/ Neighbourhood	Negligible	Negligible	High
Road User Delay	Borough	Minor Negative	Minor Adverse	High
Severance, Pedestrian Delay and Amenity	Local/ Neighbourhood	Minor Negative	Negligible/Minor Adverse	High
Increase in traffic in the vicinity of the proposed Site	Local/ Neighbourhood	Minor Negative	Negligible/Minor Adverse	High

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Increase in traffic at; 1. A548 Shotwick Road/Parkway (roundabout); 2. DIP Interchange (grade separated roundabout); 3. Drome Corner eastern dumb-bell (roundabout); 4. Drome Corner western dumb-bell (roundabout); 5. Chester Road/B5441 Welsh Road/ASDA Access (signals); and 6. A550/A494 (grade separated roundabout).	Borough	Minor Negative	Negligible/Minor Adverse	High
Impact on pedestrians, cyclists, and public transport	Local/ Neighbourhood	Minor Negative	Negligible/Minor Adverse	High
Accessibility	Local/ Neighbourhood	Negligible	Minor Benefit	High

Table 2.20 – Significance of Effect – Operation Phase

8. Proposed Mitigation

Construction Phase

- 8.1. Construction traffic is of a temporary nature and as a result it would be inappropriate to provide permanent infrastructure to fully mitigate the environmental impact. However, detailed on Site practices would be implemented to control and mitigate the additional traffic. These could be agreed with the Local Authority prior to construction.
- 8.2. To mitigate against increased traffic movements related to the construction activities, the following measures would be considered:
- Introduction of route management strategies to ensure that HGVs travel outside of peak periods where possible and avoid sensitive residential areas, notably Welsh Road through Garden City;
 - In relation to construction workers, sustainable transport choices will be encouraged so that the number of cars is kept to minimum. Where workers do travel by car, dedicated car parking facilities will be provided so that vehicles do not park on the public highway;
 - The nuisance arising from construction traffic and HGVs bringing in imported fill material would be mitigated via considerate construction practices and road/vehicle cleaning facilities;
 - Existing materials on-site will also be re-used wherever possible to reduce the need to deliver new materials to the Site and dispose off-site minimising the number of HGV movements on the local highway network;
 - Co-ordinate on-site construction movements via a Site Logistics Plan. This will be prepared at a later date once a contractor is appointed. It will set out how the construction site will be set up and operated;
 - Work to specified hours only to minimize disruptions;
 - List the vehicle and plant types used in detail, and assurance they can enter and exit the Site with minimal disruptions to the existing highways network;
 - Co-ordinate Pedestrian Routes and manage conflicts between pedestrian/cycle traffic and construction traffic and include the use of designated walkways, crossing points, and barriers;

- Trip Generation – identification of anticipated level of vehicular traffic during each phase of construction with an aim of reduction of required movements where possible through a combination of route planning, construction activity phasing, and optimal loadings of delivery and construction vehicles;
- Construction Access Strategy;
- Parking provisions within the site;
- Monitoring of the condition of the local highways to identify if any damage has arisen as a result of the construction activities and ensure remedial work will be carried out;
- Implementation and enforcement of safe speed limits within the work site;
- Entrance and egress to and from the site should be controlled via a gateman located within a cabin next to the entrance point;
- Maintaining access for emergency services;
- Signage Requirements;
- Banksman Requirements;
- Notification of public and local businesses;
- Delivery requirements and procedures; and
- Prevention of silt and solids being tracked onto Public Highways.

8.3. A Construction Environmental Management Plan (CEMP) will be produced to manage the impact of the traffic associated with the construction of the Proposed Development. This is to be agreed with the local authorities and will contain a package of measures to reduce deliveries and manage deliveries to the Site.

Operational Phase

8.4. As previously stated, (refer to paragraph 5.28 above and Section 5.2 in the accompanying TA), the Transport Implementation Strategy (TIS) undertaken to support the both the CHEL Airfields outline planning permission and the PGNGL former Corus Garden City Northern Gateway outline planning permission identified the following mitigation packages:

Mitigation I

- Installation of part-time traffic signals on the A494 northbound off slip at the Drome interchange with the A548 (the scheme shall include details of timing, priorities, and

- queue detection) plus the widening to two lanes of the A494 northbound off slip at the Drome interchange with the A548;
- Installation of traffic signals on the A494 northbound and southbound off slips at the Queensferry interchange with the A550 (the scheme shall include details of timing, priorities, and queue detection);
- The reconfiguration of the existing merge arrangement on the southbound carriageway of the A494 between the Drome interchange and the River Dee.

Mitigation 2

- Installation of traffic signals on the A494 northbound and southbound off slips at the Deeside Industrial Park interchange with the A548 (the scheme shall include details of timing, priorities, and queue detection);
- A548 Shotwick Road/Parkway Roundabout junction improvement.

8.5. Further details of the above mitigation packages are provided below:

A548 Shotwick Road/Parkway (roundabout)

- Signalising the A548 west-bound entry and the parkway entry will provide additional capacity to accommodate development traffic;
- MOVA control would be used for flexible response to increased traffic flows while minimising delay;
- Only minor carriageway works are envisaged. A new 2m wide traffic island will be required to separate A548 ahead and left turning traffic and to accommodate 2 traffic signal poles. There may be potential for narrowing the circulating carriageway on the east circulating section;
- The A548 east bound would be left as priority controlled, although in practice capacity would be increased due to improved gaps created by the upstream traffic signals.
- Signals would be configured as a single stream with the A548 approach rigidly coordinated with its downstream stop line.

DIP Interchange (grade separated roundabout)

- Signalising the A550 off-slips, including MOVA signal control, is intended to alleviate any congestion arising from the development, particularly for employment trips coming from the north. Priority controlled entries downstream of signalised nodes should also be improved by headway compression and gaps due to intergreens. It was assumed signals would be operational 24hr;
- No alterations to kerb lines envisaged;
- Re-marking of the east section would be required to accommodate 3 lanes. Carriageway width is currently approximately 11.5m.

Drome Corner dumb-bell (roundabout)

- Signalising the off-slip, including MOVA signal control. It was assumed this would be under part-time signal control as it would not be required during off-peak periods. The use of part-time signals should keep delays to a minimum. Signal control could be triggered by queues on the A550 off-slip;
- Minor road widening would be required to accommodate 2 x 3m lanes for the roundabout approach. A section of hard shoulder would need to be converted to running lane operation, possibly requiring some re-construction or strengthening work.

A550/A494 Grade Separated Roundabout

- Signalising the off-slips, including MOVA signal control.
- Increasing circulating stacking capacity by re-marking the circulating sections that pass under the main line to 3 lanes. These are currently marked as 2 wide lanes with a hatched area. OS digital plans indicate carriageway width to be approximately 9.6m, allowing 3 x 3.2m lanes where the roundabout radii are relatively relaxed (approximately R150m). No kerbing alterations are envisaged.
- Improved spiral markings.

8.6. It is worth noting that the mitigation works identified as part of the outline applications have either been delivered or are currently being delivered and therefore no further offsite highway works are required by ICT UK Ltd to facilitate this development.

- 8.7. As part of the Road 2 and Road 3 spine road assessment works submitted with the separate reserved matters applications, capacity assessments of the two junctions connecting the internal spine road with Welsh Road has been undertaken. This confirmed that the junctions have sufficient capacity to accommodate all the traffic associated with the Northern Gateway Site.

Accessibility

- 8.8. In accordance with Transport Planning Policy, the Proposed Development would be designed to encourage sustainable forms of transport and integration with the existing community. To achieve this, physical measures will be incorporated into the Development Proposals, such as the provision of a shared foot / cycle path along the length of the re-aligned spine road, in turn providing pedestrian and cycle access into the Site from the main entrance.
- 8.9. In addition, a Travel Plan (provided in Appendix 2.2) would be implemented to influence travel choices. This is effectively a management tool which ensures that all the travel opportunities, location advantages and sustainable initiatives are disseminated amongst residents, staff, and visitors of the Proposed Development. The Travel Plan will include targets that are monitored on an annual basis with a report being provided to the Local Authority.
- 8.10. Measures contained within the Travel Plan would include promotion of existing sustainable transport links including the excellent local cycling provision as well as updated employees and residents of the public transport service available.
- 8.11. The principal aim of the Travel Plan would be to reduce the number of trips to the Site made by single occupancy car journeys and promote the use of walking, cycling and public transport to access the wider Northern Gateway Site and Garden City.
- 8.12. No further mitigation measures are required with regard to accessibility as the Development Proposals are considered to have a minor beneficial impact.

Accidents and Safety

- 8.13. No mitigation measures are considered necessary with regard to highway safety as the Development Proposals are considered to have a negligible impact.

9. Potential Residual Effects

- 9.1. The significance of the impacts of the development including the overall development mix for the Airfields Site has been reassessed following the mitigation measures discussed above.

Potential Residual Effects – Construction Phase

- 9.2. The overall impact of the proposal in terms of traffic and transport issues during the construction phase is highlighted in the table below:

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level	Mitigation	Residual Significance of Effect
Increase in HGV traffic flows may impact on driver delay due to construction traffic.	Local/ Neighborhood	Minor Negative	Negligible/Minor Adverse	High	CEMP and re-use on Site materials where possible to reduce deliveries/ disposal minimizing the number of HGV movements on the highway network	Negligible
The HGVs associated with the construction process may result in increased dust and dirt.	Local/ Neighborhood	Minor Negative	Negligible/Minor Adverse	High	Wheel cleaning facilities & CEMP	Negligible
Increase in HGV traffic flows on the local highway network may impact on severance, driver delay, pedestrian amenity, fear and intimidation, and road safety.	Local/ Neighbourhood	Negligible	Negligible	High	Encourage sustainable transport choices and provide dedicated off-street parking facilities	Negligible

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level	Mitigation	Residual Significance of Effect
The construction of the Site will create a number of construction jobs over a number of years. These workers will arrive from various locations and therefore the additional traffic may have an impact on the local highway network in terms of driver delay, pedestrian amenity, and road safety.	Local/ Neighbourhood	Negligible	Negligible	High	CEMP and encourage sustainable transport choices	Negligible

Table 2.21 – Residual Significance of Effect – Construction Phase

Potential Residual Effects – Operational Phase

- 9.3. The overall impact of the proposal in terms of traffic and transport issues during the operational phase is highlighted in the table below:

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level	Mitigation	Residual Significance of Effect
Accidents and Safety	Local/ Neighbourhood	Negligible	Negligible	High	Minor Benefit	Negligible
Road User Delay	Borough	Minor Negative	Minor Adverse	High	Minor Benefit	Negligible
Severance, Pedestrian Delay and Amenity	Local/ Neighbourhood	Minor Negative	Negligible/Minor Adverse	High	Minor Benefit	Negligible
Increase in traffic in the vicinity of the proposed Site	Local/ Neighbourhood	Minor Negative	Negligible/Minor Adverse	High	None	Negligible

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level	Mitigation	Residual Significance of Effect
Increase in traffic at; 1. A548 Shotwick Road/Parkway (roundabout); 2. DIP Interchange (grade separated roundabout); 3. Drome Corner eastern dumb-bell (roundabout); 4. Drome Corner western dumb-bell (roundabout); 5. Chester Road/B5441 Welsh Road/ASDA Access (signals); and 6. A550/A494 (grade separated roundabout).	Borough	Minor Negative	Minor Adverse	High	Proposed infrastructure improvements and mitigation packages (referred to in paragraph 8.4 above)	Negligible
Impact on pedestrians, cyclists and public transport	Local/ Neighbourhood	Minor Negative	Negligible/Minor Adverse	High	Improved pedestrian/ cycle linkages. Travel Plan. Promoting existing sustainable transport links including the excellent local cycling provision as well as updated employees and residents of the public transport service available.	Minor Benefit
Accessibility	Local/ Neighbourhood	Negligible	Minor Benefit	High	None	Minor Benefit

Table 2.22 – Residual Significance of Effect – Operation Phase

10. Additive Impacts (Cumulative Impacts and their Effects)

10.1. For the purposes of this ES, we define the additive cumulative effects as:

‘Those that result from additive impacts (cumulative) caused by other existing and/or approved projects together with the project itself and the synergistic effects (in-combination) which arise from the reaction between impacts of the project on different aspects of the environment.’

10.2. The developments that are likely to have a cumulative impact when considered with the proposed development have been scoped with the Local Authority and Key Consultees during the preparation of this ES (a full list is included within Section 9 of the ES Part 1 Report). The following table includes the agreed list of cumulative developments that have been assessed in respect of Traffic and Transport. These are also shown geographically on the plan included at Appendix 13 of the ES Part One Report.

10.3. The additive impacts and their effects and the synergistic effects are considered in turn below.

No.	Cumulative Development	Details	Status	Justification for Inclusion in Cumulative Assessment
1	<p>Airfields (former RAF Sealand) Site (Northern Gateway)</p> <p>LPA ref: 049320 and last varied S73 application LPA ref: 061125.</p> <p>Applicant: Crag Hill Estates Ltd.</p>	<p>Outline application for the redevelopment of a strategic brownfield site for an employment led mixed use development with new accesses and associated infrastructure including flood defences and landscaping.</p> <p>The Net Cumulative Development associated with the Airfields site after deducting the floor space (124,344m²) taken up by the Proposed ICT Paper Mill Facility (B2, B8, ancillary B1a) and operational Amazon development (ref: 060222) is as follows:</p> <p>Development comprises:</p> <p>Residential (C3): 689 units</p>	<p>LPA ref: 049320 Planning permission granted by Flintshire County Council in January 2013.</p> <p>The last varied S73 application was granted on the 26 April 2021 (ref: 061125) to remove conditions 26, 28, 30, 34 and 44 and vary condition 13.</p> <p>Development expected to come forward over the next 0-5 years.</p>	<p>It is a committed development and therefore included within the future baseline and assessed within the assessment of the Proposed Development. It does not therefore need reconsidering in the cumulative assessment for traffic and transport, noise and vibration and air quality</p>

No.	Cumulative Development	Details	Status	Justification for Inclusion in Cumulative Assessment
		Retail (A1): 4,646m ² Office (B1a): 6,533m ² B2 /B8 Employment: 60,044m ² Car Dealership (Sui generis): 7,7 Total Net floorspace: 689 units / 79,002m²		
2	Former Corus Garden City Site (Northern Gateway) Applicant: PGNGL Outline (LPA ref: 054758) / S73 application (LPA ref: 059635)	Employment-led mixed-use development, incorporating Logistics and Technology Park (B1, B2, B8) with residential (C3), local retail centre (A1), hotel (C1), training and skills centre (C2, D1), new parkland; conversion of buildings, demolition of barns; and associated infrastructure comprising construction of accesses, roads, footpaths / cycle paths, earthworks and flood mitigation / drainage works at Northern Gateway, Land off Welsh Road, Deeside. Development comprises: Residential (C3): 770 units Retail (A1): 2500m ² Office (B1a): 3300m ² Light industrial uses (B1b, B1c): 7400m ² Hotel Uses (C1): 3000m ² Training and skills centre (C2, D1): 4000m ² Logistics Park (B2, B8, ancillary B1a): 120000m ² Total floorspace: 770 units / 140,200m ²	Outline planning permission granted by Flintshire County Council in May 2014. The last permission to be granted under a S73 application was approved in June 2020 (ref: 059635) was for removal of conditions 6, 8, 11 and 32 and variation of conditions 7, 31, 36 and 44. Development expected to come forward over the next 0-10 years.	It is a committed development and therefore included within the future baseline and assessed within the assessment of the Proposed Development. It does not therefore need reconsidering in the cumulative assessment for traffic and transport, noise and vibration and air quality.

Table 2.23– Cumulative Development

10.4. This assessment has considered the impact of the Proposed Development including the cumulative developments referred to in Table 2.23 in the vicinity of the Site. All the above developments have been included in the future baseline flows and the conventional traffic forecasting detailed in previous sections of this paper. Therefore, the developments are already fully considered.

- 10.5. The TA prepared by Curtins and ES conclude that there are no traffic and transportation reasons why this development should not be granted planning approval

11. Conclusion

- 11.1. This ES Technical Paper ‘Traffic and Transportation’ has been prepared by Curtins and considers the proposed ICT UK Ltd Paper Mill Facility upon the traffic and transportation conditions within the vicinity of the Site.
- 11.2. The Site is identified for B1, B2 B8 employment development as part of its allocation under Policy HSG2A in the Flintshire UDP (2011) for mixed use development and has outline planning permission (ref: 049320) for an employment led mixed use development granted in January 2013 and subsequently varied (ref: 061125) in April 2021.
- 11.3. It is intended to deliver the development in three phases as summarised below:
- Phase 1 (B2, B8 ancillary B1a Uses) 66,809sqm
 - Phase 2 (B2, B8 uses) 17,002sqm
 - Phase 3 (B2, B8 uses) 40,533sqm
 - Total upon completion 124,344sqm
- 11.4. The methodology is based on the Institute of Environmental Management and Assessment (IEMA) ‘Guidelines for the Environmental Assessment of Road Traffic’ (1993) and in accordance with the guidance the following rules will be used as a screening process to delimit the scale and extent of the assessment:
- *“Include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%); and*
 - *Include any other specifically sensitive areas where traffic flows have increased by 10%, or more.”*
- 11.5. At the various agreed junctions within the study area, the impact in terms of capacities, queues and driver delays have been assessed as part of the TA. The junctions assessed have been shown to either function within capacity or explained as to why those that exceeded capacity did so.
- 11.6. Any identified highway mitigation associated with the development has also been set out within this ES, with more detail being covered within the TA (Appendix 2.1).

- 11.7. Whilst the proposals are considered to be appropriate for the Site, it is accepted that the development will have an impact on the environment both in the context of the Site and the wider areas.
- 11.8. The assessment of the impacts has shown that no higher significance of effects than a minor adverse impact was shown.
- 11.9. These impacts can be both positive and negative and for the latter forms it has been demonstrated they can be suitably mitigated against to keep residual impacts to a minor adverse or negligible level.
- 11.10. The TA determines the highway impact of the traffic and transportation aspects of the Proposed Development and considers these in full, making recommendations for junction improvements and other highway mitigation as appropriate. Any such mitigation has been developed through close liaison with the relevant highway authority to ensure the proposals are appropriate.
- 11.11. The additional considerations which have been highlighted and discussed within this section of the ES have cumulated in identifying that all residual impacts associated with traffic and transport issues are no greater than minor adverse about their risk and severity.

Reference List

- Planning Policy Wales (Edition 11) February 2011
- The Wales Transport Strategy 2021
- Technical Advice Note (TAN) 18: Transport
- North Wales Joint Local Transport Plan 2015
- The Deeside Plan – Flintshire County Council
- Flintshire Unitary Development Plan
- Guidelines for the environmental assessment of road traffic

Appendices

Appendix 2.1 – Transport Assessment

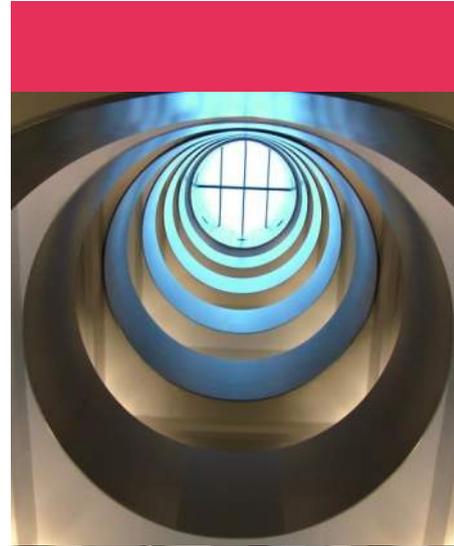
Paper Mill Facility, Plot C Airfields

Northern Gateway, Deeside

Transport Assessment

Curtins Ref: 079407-CUR-00-XX-RP-TA-V05
Revision: V05
Issue Date: 20 September 2021

Client Name: Industrie Cartarie Tronchetti (ICT) UK Ltd and Crag Hill Estates Ltd (CHEL)



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Table of Contents

1.0	Introduction.....	1
1.1	Background	1
1.2	Planning History	1
1.3	Purpose and Scope of this Report	4
1.4	Purpose of This Report	4
1.5	Structure of the Report.....	5
2.0	Existing Site Situation.....	6
2.1	Introduction.....	6
2.2	Local Highway Network.....	10
2.3	Highway Safety	11
2.4	Planned Infrastructure.....	12
3.0	Development Proposals	15
3.1	Introduction.....	15
3.2	Parking and Vehicle Circulation	16
3.3	Proposed Access Arrangements and Highway Works	18
4.0	Accessibility by Sustainable Transport.....	22
4.1	Introduction.....	22
4.2	Pedestrian Accessibility	22
4.3	Accessibility by Cycle.....	24
4.4	Public Transport Accessibility	26
4.5	Summary.....	31
5.0	Highway Impact Assessment	32
5.2	Trigger Points for Off-site highway Works	35
5.3	Scope of Assessment	36
5.4	Enabling Works - Development of Road 2 and Road 3 Vehicle Access.....	37
5.5	ICT Traffic Generation.....	39

Transport Assessment

5.6	Cumulative Impact of ICT Traffic.....	45
5.7	Cumulative Development Impact (Northern Gateway)	50
5.8	Cumulative Traffic Impact for CHEL Site Only	51
5.9	Summary	51
6.0	Transport Planning Policy	53
6.1	Introduction.....	53
6.2	Planning Policy Wales (Edition 11)	53
6.3	Wales Transport Strategy	54
6.4	Planning Policy Wales, Technical Advice Note 18: Transport	55
6.5	North Wales Joint Local Transport Plan 2015	55
6.6	Deeside Plan	56
7.0	Summary and Conclusion	57
7.1	Summary	57
7.2	Conclusion.....	57

Tables

Table 2.1– Summary of Accident Records	12
Table 3.1 –Flintshire County Council Parking Standards.....	17
Table 4.1 – CIHT Recommended Walking Distances	22
Table 4.2 –Bus Service Summary	28
Table 5.1 – CHEL Site Traffic (Approved Traffic Envelope).....	34
Table 5.2 – CHEL Site Traffic (Road 2 and Road 3 Highway Infrastructure Works)	39
Table 5.3 – PGNGL Site Traffic Road 2 and Road 3 Highway Infrastructure Works).....	39
Table 5.4 – Phase and Number of Staff	40
Table 5.5 – Mode of Travel to Work	42
Table 5.6 – Derived Mode share	42
Table 5.7 – Staff Mode share per phase.	42
Table 5.8 – Daily HGV Movements	43
Table 5.9 – ICT Trip Generation.....	44
Table 5.10 – App Ref: 061585 Anticipated Trip Demand.....	45
Table 5.11 – App Ref: 060411 Anticipated Trip Demand.....	46
Table 5.12 – App Ref: 059514 Anticipated Trip Demand.....	47
Table 5.13 – App Ref: 060222 Anticipated Trip Demand.....	47
Table 5.14 – Cumulative Trip Demand.....	48
Table 5.15 –Trip Generation – Plot 4 PGNGL Site	50
Table 5.16 –Cumulative Traffic.....	50
Table 5.17 – CHEL Site Cumulative Traffic.....	51

Plans

079407-CUR-00-XX-DR-TP-06003-P01_Walking Catchment
079407-CUR-00-XX-DR-TP-06004-P01_Cycle Catchment
079407-CUR-00-XX-DR-TP-06005-P01_Public Transport Catchment

Appendices

Appendix A – Proposed Site Layout

1.0 Introduction

1.1 Background

1.1.1 Curtins has been appointed on behalf of Industrie Cartarie Tronchetti (ICT) UK Ltd and Crag Hill Estates Ltd (CHEL) to provide traffic and transportation advice in relation to the proposals to deliver the companies first tissue paper processing and production facility in the UK.

1.1.2 ICT UK Ltd has identified the Northern Gateway site at Queensferry in Flintshire as a suitable site and location for their tissue paper processing and production facility in the UK.

1.1.3 The proposed planning application is described as;

“Full Planning Application for erection of Paper Processing Mill to produce and manufacture tissue paper (B2, B8 use class) with ancillary B1a office space; associated servicing and infrastructure including car parking, HGV parking and vehicle and pedestrian circulation; noise mitigation features; earthworks to create development platforms; creation of drainage features including a new outfall to the River Dee; water treatment plant; and landscaping.”

1.1.4 The intention is to develop the Paper Mill facility over three phases. The Comprehensive Development (all three phases) comprises 124,344sqm of employment floorspace including manufacturing and production area (B2 use class), ancillary offices (B1a use class), and a warehouse section, (B8 use class) with car parking and HGV parking.

1.1.5 The proposed ICT facility will be located on Plot C of the Airfields site.

1.2 Planning History

1.2.1 The Northern Gateway Site (including the Application Site) has outline consent to deliver employment led mixed use development.

1.2.2 The Northern Gateway site comprises of two parcels of land currently in ownership of CHEL and Pochin Goodman Northern Gateway Ltd (PGNGL). Both sites have independent planning consents which will be considered as a wider masterplan proposal. The planning consent reference numbers and summary are listed below.

1.2.3 CHEL, planning reference 049320 (approved 07/01/2013) - Outline application for the redevelopment of a strategic brownfield site for employment led mixed-use development with new accesses and associated infrastructure including flood defences and landscaping.

1.2.4 The following planning applications were subsequently submitted for the CHEL plots:

Transport Assessment

- 058990 (Granted 25/10/2018 subject to conditions) – Section 73 Application to remove conditions 7, 15, 16 and 17 of the outline planning permission 049320. This permission changes the numbering of the planning conditions and is the current extant outline planning permission.
- 059903 (Approved 19/08/2019) – Reserved Matters Planning Application for the erection of 283 dwellings.
- 060222 (Permitted 08/01/2020) – Reserved Matters Planning Application for the erection of a warehouse (Use Class B8) with ancillary office accommodation (Use Class B1).
- 061125 (Approved 26/04/2021 subject to conditions) – Section 73 Application for removal of conditions 26, 28, 30, 34 and 44 and variation of condition 13 following grant of planning permission (058990).
- 060899 (Approved 26/4/2021) - An application was submitted on behalf of CHEL in January 2020 to discharge condition 28 (part), of the original outline planning permission (App Ref: 058990) for employment led mixed use development at The Airfields site.
- 061896 (Approved 22/12/2020) – Application for approval of details reserved by condition no 7 (sustainable drainage scheme), 9 (foul drainage connections), 15 (landscaping, treatments, 17 (tree retention & protection) 19 construction, environmental management plan) attached to planning ref. 058990.
- 062057 (Approved 26/4/2021) – Application for approval of reserved matters following outline approval ref.058990 for the construction of a foul water sewer including two cross culverts and a temporary earth cover bund between commercial Plots B & C.

1.2.5 PGNGL, planning reference 050125 (approved 13/05/2014) - Outline application for an employment-led mixed-use development, incorporating a Logistics and Technology Park (B1, B2, B8) with residential(C3), local retail centre (A1), hotel (C1), training and skills centre (C2, D1), new parkland; conversion of buildings, demolition of barns; and associated infrastructure comprising the construction of accesses, roads, footpaths/ cycle paths, earthworks and flood mitigation/drainage works.

1.2.6 The following planning applications have subsequently been submitted for the PGNGL plots:

- 054758 (Approved 16/03/2016) – Section 73 application to vary planning conditions 6, 9 and 42, and removal of conditions 17, 18 and 19 of reference 050125 to deliver up to 70 dwelling in advance of any off-site highway infrastructure improvements (Northern Gateway Transport Technical Note / Curtins Document Reference: TPMA1230/TN/REV A; Former Corus Garden City Site Welsh Road, Garden City, Deeside; Section 73 Application; 16th December 2015).
- 056540 (Approved 28/02/2018) – Section 73 application to revise the approved scheme, amongst other variations, to increase the maximum number of dwelling from 600 to 770.

Transport Assessment

- 059635 (Permitted 05/06/2020) – Section 73 application for removal of conditions 6, 8, 11 and 32 and variation of conditions 7, 31, 36 and 44 following grant of planning permission. (056540).
- 061585 (Submitted July 2020) - Application for approval of reserved matters following outline approval (059635) for the erection of 104 dwellings.
- 060411 (Submitted September 2019) - Application for approval of reserved matters following outline approval (056540) for the erection of 129 no. dwellings
- 062408 (submitted January 2021) – Application for the removal or variation of Condition 1 of the Phase 1a enabling works reserved matters (058868) (Decision pending)
- 062411- Application for removal of conditions 13,31 attached to the planning permission 059365 (Decision pending).
- 062409 – Application for approval reserved matters for enabling works on residential phases 1b, 2 and 3 following outline approval 059635 (Decision pending).

1.2.7 Reserved Matters Application (ref:054488) was approved in March 2016 for the Welsh Government to deliver Road 1 of the highway and associated infrastructure works in relation to the Northern Gateway site. A second planning application was submitted in June 2021 to deliver Road 2 and Road 3 of the Highway infrastructure works which will support and facilitate the development of the Northern Gateway site.

1.2.8 Figure 1.2 shows the proposed Road 1, Road 2 and Road 3 spine road layout.

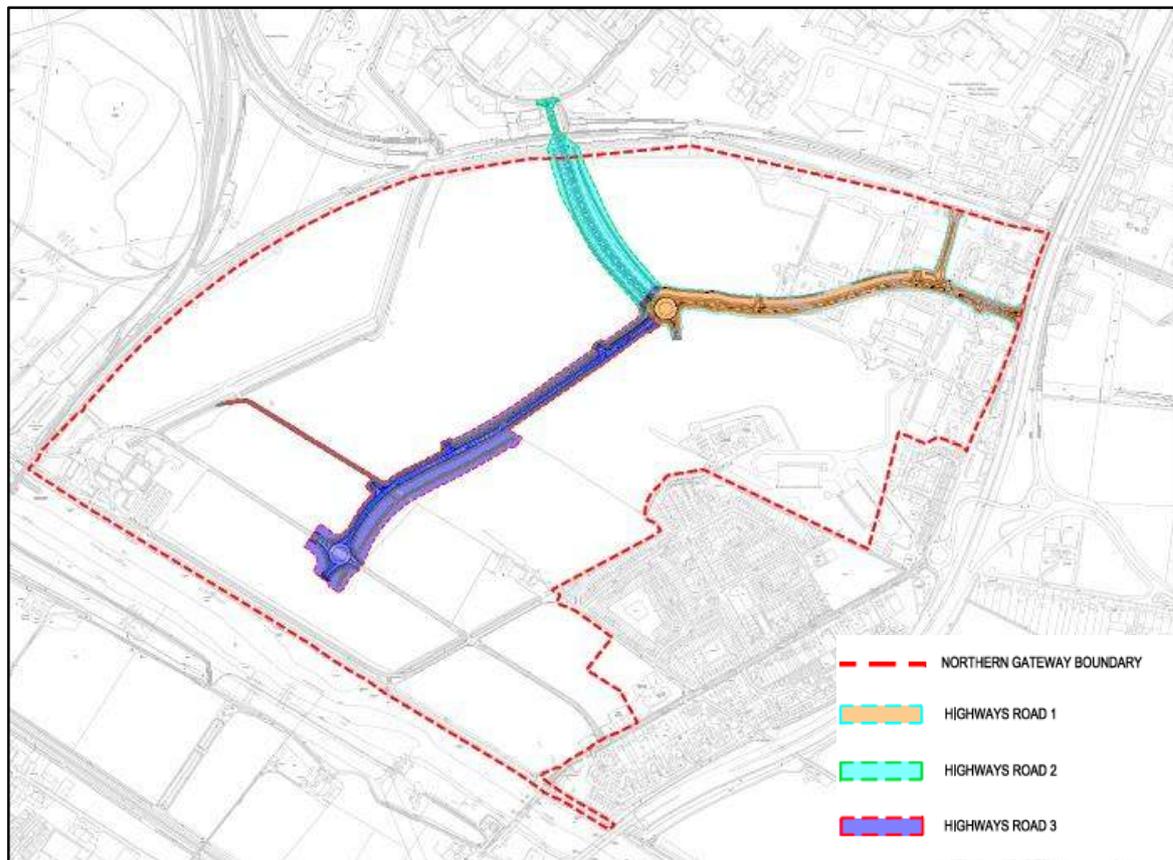


Figure 1.1 – Proposed Internal Spine Road Layout

1.3 Purpose and Scope of this Report

- 1.3.1 The traffic impact of the approved employment and residential elements of the entire Northern Gateway development have been agreed and approved by Flintshire County Council (FCC). Trigger levels for the delivery of off-site highway mitigation have also been approved by FCC.
- 1.3.2 This Transport Assessment (TA) has been prepared to inform all traffic and transportation matters associated with the full planning application for the Proposed Paper Mill Development in the context of the Outline Planning Application consents.

1.4 Purpose of This Report

- 1.4.1 Curtins produced a scoping document dated August 2021 and submitted to FCC as part of an informal EIA scoping exercise. It was agreed as part of the scoping exercise that the TA will consider the following:
- Details of the existing highway situation;
 - Details of the development proposals;

Transport Assessment

- Details of the access arrangements;
- A review of accident data for a five year period;
- Commentary on relevant transport planning policy and the site's accordance with this;
- Audit the accessibility of the site by sustainable modes of travel;
- Commentary on the impact of the ICT traffic; and
- Incorporate the results into a Transport Assessment.

1.4.2 This TA has been prepared in broad accordance with Planning Policy Wales (PPW).

1.5 Structure of the Report

- 1.5.1 Following this introduction, **Section 2** of the report provides a comprehensive description of the existing site and its location. This includes the local highway network and facilities for pedestrians, cyclists and public transport users as well as highways safety.
- 1.5.2 **Section 3** contains details of the development proposals whereas **Section 4** contains an assessment of the site by non-car modes of transport. Sections 5 assesses the impact of the proposed development on the highway network.
- 1.5.3 A review of local and national transport planning policy is included in **Section 6**, and the report is summarised and concluded in **Section 7**.

2.0 Existing Site Situation

2.1 Introduction

- 2.1.1 The Site is located in North of Wales, within the local authority area of Flintshire. The site is located on the western edge of Garden City, a village within the Sealand area of Flintshire. The nearest town centre is Queensferry, which is approximately 1 mile to the south of the site. The town of Mold is 8 miles to the south west and the city of Chester is 6 miles to the east.
- 2.1.2 The Site occupies a strategic location, not only within Flintshire, but also in a sub-regional and national spatial context. Located next to Deeside Industrial Park, a major centre for employment, the site lies strategically within the wider Deeside area, and is well served by the local trunk road network with access from Welsh Road (B5441). To the east of the B5441 Welsh Road lies the A494 Trunk Road. The A494 is a dual carriageway that connects the M56 Motorway to the A55 and is a strategic transport route which connects North Wales to North West England, providing links to Liverpool, Cheshire and Greater Manchester.
- 2.1.3 The Site is part of, and integral to, the larger Deeside Enterprise Zone (EZ) designated by the Welsh Government in September 2011. Figure 2.1 shows the location of the site in a national context with Figure 2.2 showing the site in regional context.



Figure 2.1 – National Context Plan

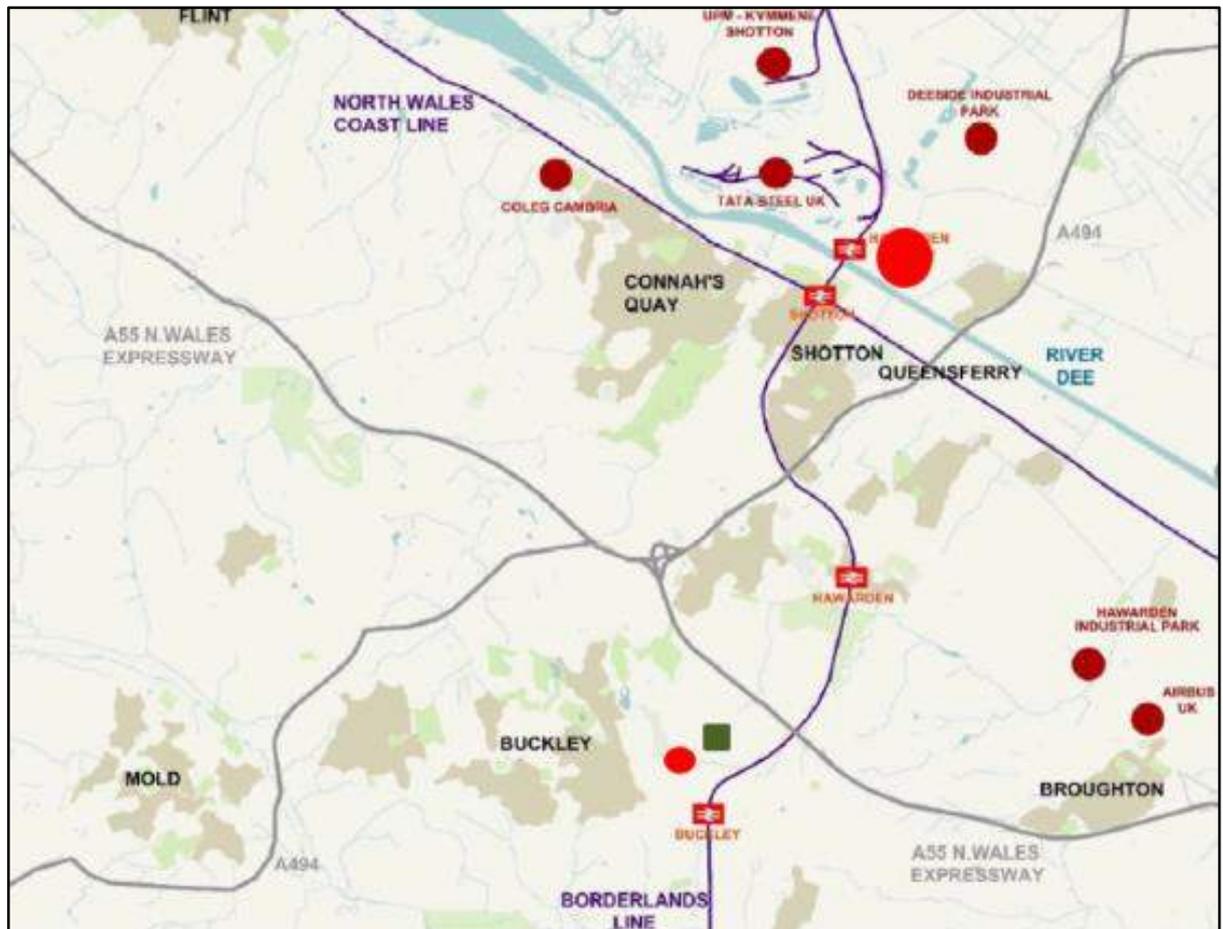


Figure 2.2 – Regional Context Plan

- 2.1.4 The Application Site Boundary relates to an area of land of approximately 23.86 hectares (58.96 acres) in extent and forms part of the former RAF Sealand 'South Camp' site, now referred to as the Airfields, which forms part of the Northern Gateway Strategic Mixed Use Development site allocated under Policy HSG2A in the Flintshire UDP (2011). Outline planning permission (ref: 049320) was granted for an employment led mixed use development in January 2013 and subsequently varied with the last Section 73 application approved in April 2021 (ref: 061125).
- 2.1.5 The Site spans across Plot C as identified in The Airfields Design Statement (July 2013) submitted to discharge condition 6 of the outline planning permission (ref: 049320). Figure 2.3 extracted from The Airfields Design Statement.

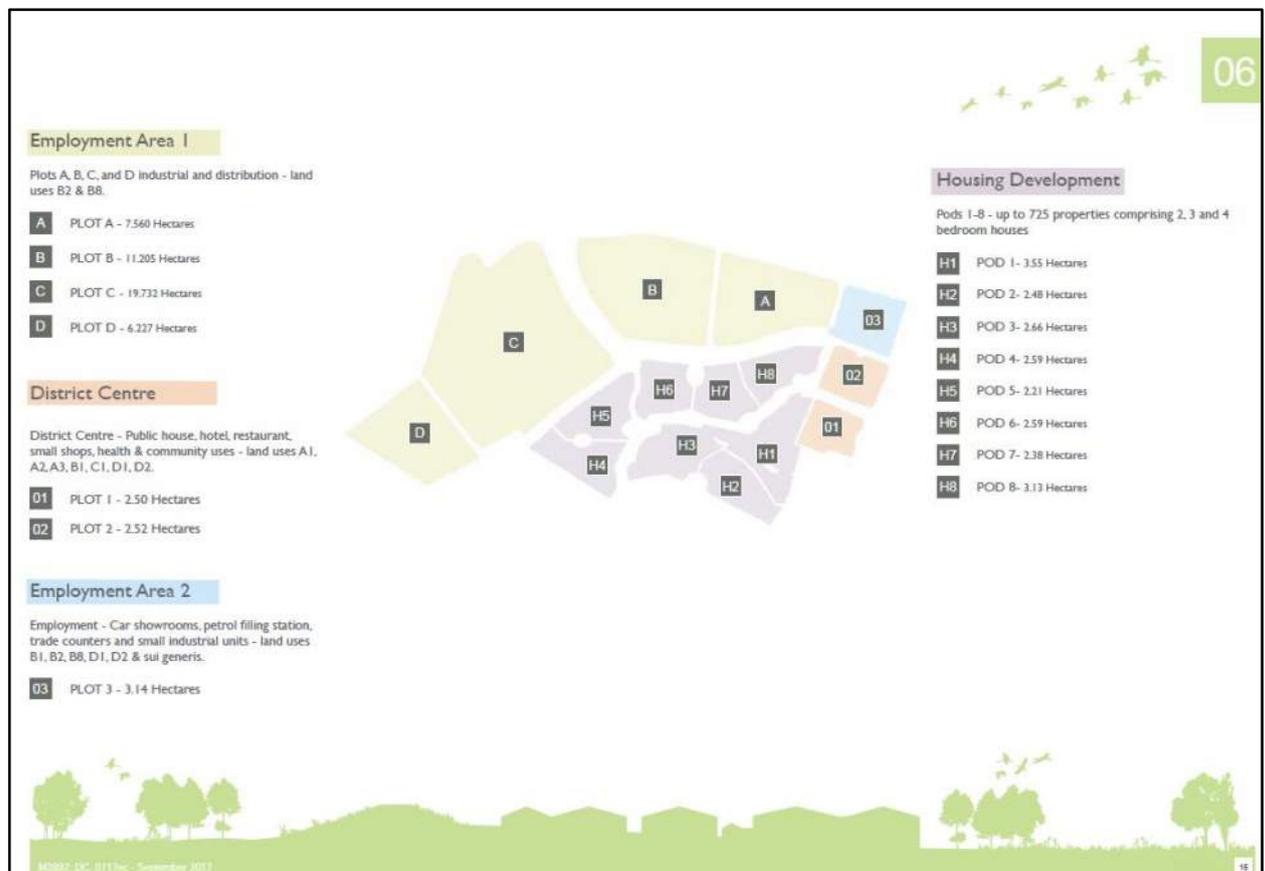


Figure 2.3 – Plan Extracted from Airfields Design Design Statement (July 2013)

- 2.1.6 The Application Site occupies the north western part of the Airfields site.
- 2.1.7 The Site currently comprises managed grassland. It does not have any of the former RAF Camp building bases and site roads that were removed in the phase 1 enabling works associated with the Airfields site. There is a group of trees along the north western boundary on the bank of the Shotwick Brook and a hedge along the western boundary.
- 2.1.8 The north and western perimeter of the Application Site abuts the existing disused rail corridor which now incorporates an important cycling and walking route. This route has been developed by Sustrans and is known as the Chester Millennium Greenway, Chester to Connah’s Quay Railway Path. Linking Fairfield Road in Chester approximately 4.5 miles to the east with Hawarden Bridge, this route uses the alignment of the former Mickle Trafford Freight line and forms part of the National Cycle Network Route 5. Beyond the National Cycle Route is the Deeside Industrial Park (DIP).
- 2.1.9 To the north western boundary of the Site is the Shotwick Brook. Public Right of Way Footpath No. 3 runs parallel with a section of the western banks of Shotwick Brook on land owned by PGNGL.

Transport Assessment

- 2.1.10 There is also hedgerow beyond the western boundary of the Application Site which separates the CHEL owned land from the adjoining land owned by PNGNL which forms part of the former Corus Garden City site which also forms part of the Northern Gateway Strategic Mixed Use Development site allocated under Policy HSG2A in the Flintshire UDP (2011).
- 2.1.11 Beyond the eastern and southern boundaries of the Application Site will be the Welsh Government's proposed Commercial Spine Road Phases 2 and 3. The proposed Commercial Spine Road is now the subject of a reserved matters application submitted to Flintshire County Council (FCC) in June 2021 (063191 and 063187) and once determined will provide highways access into Plot C.
- 2.1.12 This new road which will connect into the completed Road 1 constructed by Welsh Government which takes access from Welsh Road will provide a public transport link into the Deeside Industry Park and link the Airfield site with the adjacent former Corus Garden City site delivering a comprehensive mixed use development which will meet with the policy objectives of the Northern Gateway Strategic Mixed Use Development site allocated under Policy HSG2A in the Flintshire UDP (2011).
- 2.1.13 Beyond Road 2 of the Commercial Spine Road is vacant land identified for employment development illustrated in the approved CHEL Design Statement and granted outline planning permission. To the South of Road 3 of the Commercial Spine Road will be residential development comprising H3, H4, H5, H6, H7 and H8a. Plots H3, H5, H6, H7 and H8a is currently the subject of a reserved matters application (Ref: 062898) for 368 dwellings submitted jointly by Anwyl Homes and Bellway Homes.
- 2.1.14 The residential plots are not served from within the site from any of Roads 1, 2 and 3, so there will be no conflict between residential and commercial traffic.
- 2.1.15 The Application Site extends to the south onto the former Corus Garden City site owned by PNGNL and follows the alignment of the Road 3 of the Commercial Spine Road with the application boundary extending to the banks of the River Dee as the road makes provision for a below ground easement to allow the discharge of waste water from the proposed ICT Paper Mill Facility.
- 2.1.16 This wider land parcel referred to as the former Corus Garden City part of the Northern Gateway site proposed for a mix of employment and residential uses, currently comprises agricultural land and the Grade II Listed John Summers buildings which were previously occupied by Tata Steel. This site is contained by the River Dee to the south, Garden City and Welsh Road to the east, the Wrexham-Bidston Railway line, Harwarden Station and the Tata Steel works to the west. Garden City to the east was originally developed to house the workers of the Shotton Steelworks and comprises a mix of semi-detached and terraced housing. Garden City has some local facilities which include a pharmacy, church, post office, public houses and primary school.

Transport Assessment

2.1.17 The Site is currently designated for mixed use development within the adopted Flintshire UDP (2011) and Proposals Map and forms part of a wider area identified as the Northern Gateway Strategic Mixed-Use Allocation under Policy HSG2A. The Site is therefore identified for B1, B2 and B8 employment development.

2.2 Local Highway Network

Corus Access Road

2.2.1 This is a single carriage two-way road and runs an east west alignment. The road is approximately 2.5km long and extends between B5411 Welsh Road to the east and River Road to the west.

2.2.2 Sections of the road has three lanes with two lanes running in the west-east direction towards the B5441 Welsh Road and one lane running in the east west direction. There are no formal footways on both sides of the carriageway, however there is a grass verge located to the south of the carriageway which could be utilised by pedestrians.

2.2.3 The road forms a priority junction with Welsh Road. It is intended as part of the enabling works for the PGNGL Site to improve this by shared footway/cycle along this road to connect to the existing facilities on Welsh Road. These enabling works have now secured approval under a reserved matters application.

2.2.4 As part of the enabling highway works, it is intended to improve this road including the provision of a shared footway/cycleway along the length of the road.

B5441

2.2.5 The B5441 is a single carriageway road that runs parallel to the A494 along the south-east edge of the site. The route forms part of the Welsh Road Bridge and passes through a residential area in the immediate vicinity of the site, subject to a speed limit of 20 mph.

2.2.6 There is good pedestrian infrastructure along the road with wide footways located on both sides of the carriageway. There is also advisory cycle lanes on both sides of the carriageway. The footways and cycle lanes are clearly signed. There is streetlighting along the road as well as bus stops with shelters.

2.2.7 The National Cycle Route (NCR 563) runs along the B5441, ensuring good facilities for cyclists and facilitating sustainable modes of travel.

Transport Assessment

A494

2.2.8 The A494 is a trunk road that runs to the south-east of the site. The route, which is officially known as the Dolgellau to South of Birkenhead Trunk Road, runs between the terminus of the M56 motorway between Mollington and Capenhurst and the A470 at Dolgellau, Gwynedd.

2.3 Highway Safety

2.3.1 Personal Injury Accident (PIA) data for the highway network adjacent to the site has been obtained from the CrashMap website(www.crashmap.co.uk) for the most recent five years (2016 – 2020 inclusive). Figure 2.6 below presents the study area that has been considered as part of the highway safety assessment.

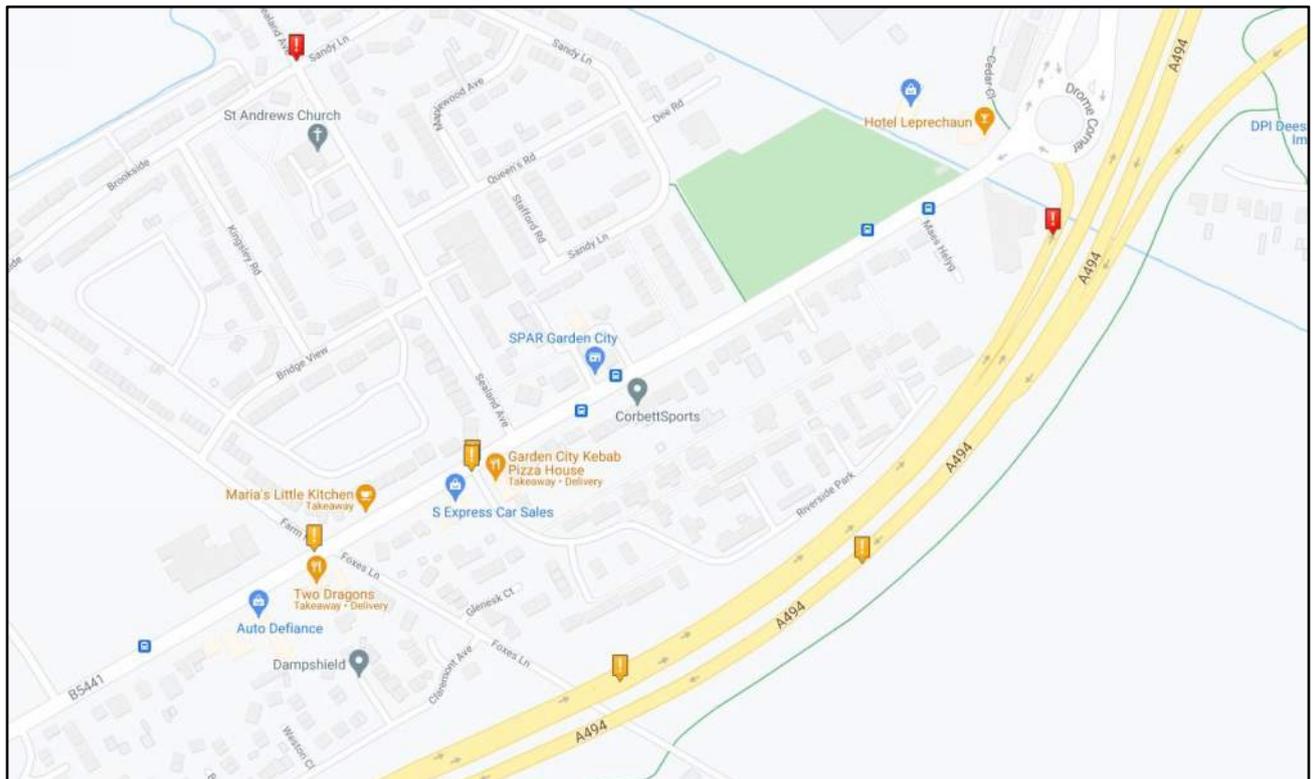


Figure 2.4 – Highway Safety Study Area

2.3.2 The recorded accidents are summarised in Table 2.1 below.

Junction/Link	Slight	Serious	Fatal	Totals
Drome Corner Rd/about	0	1	0	1
Corus Access/B5411 Welsh Road	0	0	0	0
Farm Road/B5411 Welsh Road/Fox Drive	1	0	0	1
B5411 Welsh Road/Riverside Park	2	0	0	2

Transport Assessment

Junction/Link	Slight	Serious	Fatal	Totals
Sealand Avenue/Sandy Lane	0	1	0	1
A494	2	0	0	2
Fox Drive	0	0	0	0
Totals	5	2	0	7

Table 2.1– Summary of Accident Records

- 2.3.3 Table 2.1 confirms that there have been 7 accidents in the study area during the five-year study period, comprising 5 slight severity accidents and 2 serious severity accidents. There were no fatal accidents recorded in the study area throughout the study period.
- 2.3.4 For the two serious accidents one occurred at the at the Drome Corner roundabout on the A494 northbound slip road approach. This accident involved 3 vehicles (2 cars and one goods vehicle) travelling normally along the road. The other serious accident occurred at the Sandy Lane/Sealand Avenue junction. This accident involved a car and pedal cyclist. The car was moving off and collided with a cyclist proceeding normally along the road.
- 2.3.5 A review of the above accidents does not identify any trends or clusters that could be attributed to the existing highway layout or design.
- 2.3.6 On the above basis, it is not considered that there is an existing safety issue that is likely to be exacerbated by the Proposed Development.

2.4 Planned Infrastructure

- 2.4.1 A review of regional policy has identified proposed investment programmes that will provide wider strategic mitigation and additional transport benefit on the local highway network adjacent to the proposed development and the wider Northern Gateway site. These include:

Red Route

- 2.4.2 The red route comprises a new 13km dual carriageway road and an upgrade to the existing A548, between the A55 at junction 33 (the A5119 at Northop) and the A494/A550 junction complex at Shotwick. This is intended to relieve the existing A494 and A55 between those points. The new dual carriageway will run from the A55 at junction 33 to Connah's Quay Power Station. From that point, the A548 will be upgraded to form a free-flowing expressway with grade-separated junctions, crossing the Flintshire Bridge, with a new direct connection to the A494 at Shotwick leading to the M56.

- 2.4.3 The aims of this scheme are:

- Improve capacity, reliability and journey times;
- Improve safety;

Transport Assessment

- Improve connections for businesses;
- Improve access between residential areas and places of employment;
- Reduce carbon emissions along the road; and
- Make more efficient use of the existing transport infrastructure.

2.4.4 The construction of this road was scheduled to commence in 2024 but has now been put on hold subject to a Welsh Government review.

Sustainable Transport Initiatives

2.4.5 The National Transport Finance Plan produced by the Welsh Government in 2018 update identifies several opportunities to improve sustainable access throughout the Deeside region focussing on a range of public transport enhancements. Of particular note is the proposed development and implementation of a North East Wales Integrated Transport Metro providing the potential to reduce dependence on the private motor car and encourage a greater number of trips to be made by sustainable modes of transport.

2.4.6 Whilst initiatives to implement sustainable transport measures directly support the potential for enhanced socio-economic and environmental benefits, removing vehicle trips from the network will also help support improved traffic flow at key junctions including the two Welsh Road junctions interconnecting with the Northern Gateway site.

2.4.7 Transport for Wales Rail Services, in its capacity as the new Wales and Borders train operator, has outlined a transformational investment programme throughout the network including significant proposals for North Wales. The new rail service was launched in October 2018 and has outlined the following commitments for the region, all of which support the removal of vehicle trips from the providing enhanced travel planning opportunities:

- Introduce the new fleet of diesel multiple units (DMUs) to the North Wales Coast in 2022.
- Reduce walk-up and season fares to, from and within North Wales by 10% to encourage travel.
- Invest in Shotton Station and Wrexham General from April 2024, to enable North Wales Metro capability.
- Create a true intercity experience on the North-South long-distance services, bringing 12 newly refurbished Mark IV carriages to Wales.
- Introduce two new Community Rail Partnerships on the North Wales Line and the Crewe to Hereford line. These will be supported by the recruitment of two new Community and Stakeholder Managers and 13 Community and Customer Ambassadors.
- Provide ticket machines at more stations.

Transport Assessment

- Introduce a 'pay-as-you-go' facility for users of our app from April 2021, finding the lowest available fares.
- Delivering the North East Wales Metro by increasing frequency on the Wrexham-Bidston line to two trains per hour from December 2021, with fully refurbished metro trains.
- Revising timetables in December 2022 to introduce a new Liverpool to Llandudno and Shrewsbury service one train per hour and Liverpool to Cardiff (one train every two hours) plus direct services between Manchester Airport and Bangor.

3.0 Development Proposals

3.1 Introduction

3.1.1 Whilst the Site is identified for B1, B2 B8 employment development as part of its allocation under Policy HSG2A in the Flintshire UDP (2011) for mixed use development and has outline planning permission (ref: 049320) for an employment led mixed use development granted in January 2013 and subsequently varied (ref: 061125) in April 2021, ICT UK Ltd's bespoke operational requirements are such that they require a building on Site that would exceed building height parameters approved within the extant planning permission which are currently set at 30m for this plot and requires land outside the redline application boundary granted outline planning permission.

3.1.2 The planning application therefore seeks full planning permission for this development which is described below:

Full Planning Application for erection of Paper Processing Mill to produce and manufacture tissue paper (B2, B8 use class) with ancillary B1a office space; associated servicing and infrastructure including car parking, HGV parking and vehicle and pedestrian circulation; noise mitigation features; earthworks to create development platforms; creation of drainage features including a new outfall to the River Dee; water treatment plant; and landscaping.

3.1.3 It is intended to deliver the development in three phases as summarised below:

- Phase 1(B2, B8 ancillary B1a Uses) 66,809sqm
- Phase 2 (B2, B8 uses) 17,002sqm
- Phase 3 (B2, B8 uses) 40,533sqm

3.1.4 Overall, it is intended to provide 124,344sqm with associated car and HGV parking areas. Figure 3.1 shows the proposed site layout for the completed development (Phases 1, 2 and 3). The proposed site layout is provided in Appendix A at the rear of the report.

Transport Assessment



Figure 3.1 – Proposed Site Layout

3.2 Parking and Vehicle Circulation

- 3.2.1 The parking requirements for the proposed development have been established by ICT based on their own experience of operating similar schemes.
- 3.2.2 The Proposed Development makes provision for service yards and circulation space within the Site, to allow for the loading of HGV's with finished products from the dispatch area and docking bays. The Proposed Development comprises an individual car park for a total of 26 HGV's, in the northern part of the Site adjacent to the automated finished product high bay warehouse.
- 3.2.3 Car parking areas for staff delivered as part of Phase 1 are located at the southern eastern entrance into the site (102 spaces) accessed from junction 1 of Road 2 and adjacent to the office building (97 spaces including 7 disabled spaces), accessed from junction 4 of Road 2 and a further car parking (56

Transport Assessment

spaces) to the rear of the Phase 1 Paper Mill building on the north western boundary of the Site, which will be accessed from junction 4 on to Road 3 of the Commercial Spine Road. These parking areas provide a total of 338 car spaces (including 15 disabled spaces) and 16 motorcycle spaces when the development is completed.

- 3.2.4 A total of 255 car spaces will be delivered and operational following Phase 1. It should be noted that the 102 space car park in the south eastern part of the Site accessed from junction 1 of Road 2 will be removed in order to deliver Phase 3. Phase 3 will provide a further 185 additional car parking spaces to the south of the site, which will also replace the 102 spaces which will be removed. These spaces are parallel with Road 3 of the Commercial Spine Road and will be accessed from junctions 1, 2 and 3 which provide one way entry and exit points into the site. These spaces will be operational following completion of Phase 3 in 2035 (Q3).
- 3.2.5 It is proposed to provide 70 cycle parking spaces as part of Phase 1 and 20 as part of Phase 3. Overall, 90 cycle parking spaces will be provided for the completed development.
- 3.2.6 Outside of those areas proposed for servicing and parking there remains areas of the Site which will remain undeveloped and will be safeguarded to facilitate construction and development of the second and third phases of the Mill Facility. These areas comprise land to the south of the Site, between the Phase 1 development and the southern boundary.
- 3.2.7 Parking requirements for new developments in Flintshire County Council are provided in the Supplementary Planning Guidance Note 11 adopted in January 2017. The parking requirements for cars and cycles is summarised in Table 3.1 below.

Parking Standard	Maximum
Car Parking	B1 Business including offices 1 parking space per 30sqm B2 General Industry – 1 parking space per 50sqm B8 Storage Distribution 1 car space per 100 sqm.
Cycle Parking	Administrative offices, research and development uses 1 per 350m ² gross floor area (or part thereof) General industrial uses - 1 per 500m ² gross floor area (or part thereof) Storage and distribution uses - 1 per 1000m ² gross floor area (or part thereof)

Table 3.1 –Flintshire County Council Parking Standards

Transport Assessment

- 3.2.8 It is proposed to provide 338 car parking space and 26 HGV spaces as part of the development. It is also proposed to provide 90 cycle parking spaces and 16 motorcycle spaces as well as 15 EV charging facilities.
- 3.2.9 Based on FCC's parking requirement a maximum of 1198 parking spaces is required. The proposed parking spaces are well within the required maximum.
- 3.2.10 The shift pattern information provided by ICT and detailed in Section 5 (Table 5.4) of this report confirms that there will be a maximum of 208 staff working on the site at any one time. At shift change over for the 1400-2200 shift, there could be a maximum of 318 staff members on site. Table 5.6 indicates that circa 77% of staff are likely to drive to work, based on 2011 census data. This is equivalent to 245 cars, requiring parking spaces.
- 3.2.11 Based on the above it is reasonable to assume that the maximum parking required by staff at anytime will be 245 car parking spaces. The proposed 338 car parking spaces will exceed this requirement by 93 spaces, which is sufficient to service any additional parking needs including visitor parking associated with the Proposed Development.
- 3.2.12 It is considered that based on the needs of the proposed development the car parking spaces are sufficient.
- 3.2.13 It is worth noting that this car park will also be managed as part of the travel plan process.

3.3 Proposed Access Arrangements and Highway Works

Proposed Access and Commercial Spine Road

- 3.3.1 Vehicular access into the Application Site (Plot C) will be served from Welsh Government's proposed Commercial Spine Road 2 and 3. The proposed Commercial Spine Road is now the subject of a reserved matters application submitted by Arcadis to Flintshire County Council (FCC) in June 2021 and once determined and constructed will provide highways access into Plot C. This 7.3m wide carriageway will also provide the opportunity to connect the CHEL and PGNGL elements of the Northern Gateway site with the local highway network.
- 3.3.2 This road will create eight points of access and junctions into the Application Site. Four junctions will be created into the Application Site from Road 3 of the Commercial Spine Road and four junctions into the Application Site from the east from Road 2.
- 3.3.3 Phase 1 and 2 of the Proposed Development will be served from access points referenced as junctions 1, 3, 4 and 5 of Road 2. Junction 1 will be used to provide access into a proposed car parking area utilised by staff in Phases 1 and 2 of the Proposed Development. Junction 3 will be the primary entrance

Transport Assessment

for HGV's to enter and exit the Site, once loaded and full of finished products. Junction 4 will be used to provide access to a car parking area for staff and visitors and is located in close proximity to the proposed office building. Junction 5 will be used to provide access to a HGV parking area, used as an area to hold these vehicles ready to enter Junction 3 and enter the dispatch area ready for loading of finished products.

3.3.4 Junction 4 of the proposed access from Road 3, which is at the south western end of the Site provides access to a car parking area within the Site, which will be used by staff members operating the Paper Mill section of the Facility. Junction 1, 2 and 3 into the Site from Road 3 will be utilised once Phase 3 is completed and will provide more car parking spaces for staff and operatives. All junction points into the Site will have a gated access to control security during operational hours. Junction 3 of Road 2 into the Site will also have an entrance building and gatehouse.

3.3.5 Figure 3.2 shows the proposed Phase 2 and Phase 3 as well as the ICT access junctions.

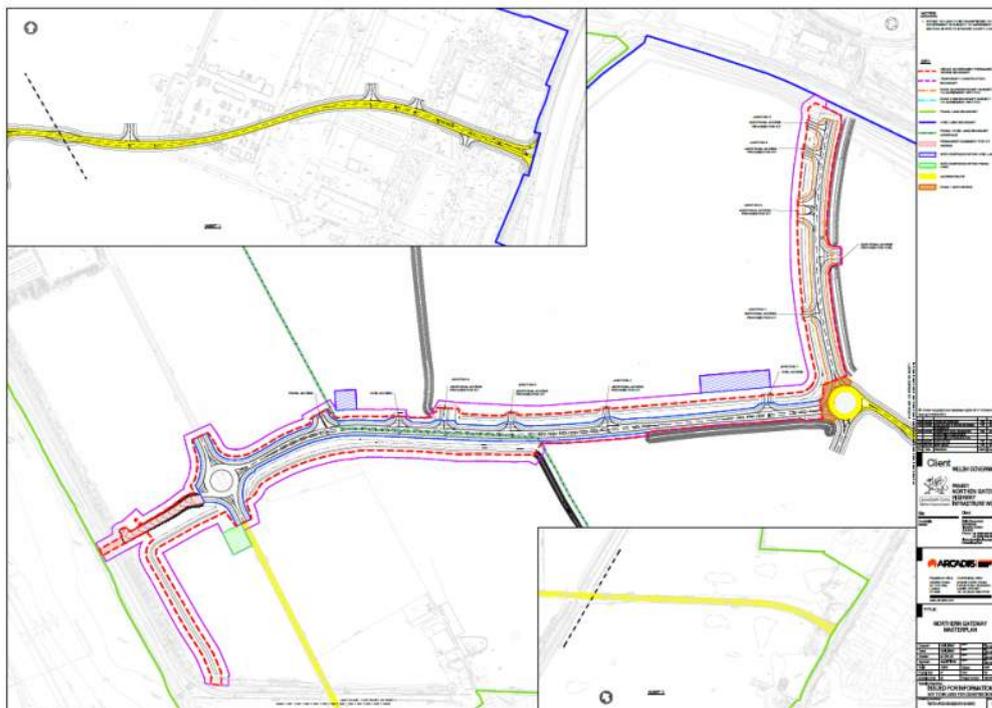


Figure 3.2 – Proposed Phase 2 and Phase 3 Spine Road and Site Access Junctions

3.3.6 The proposed Commercial Spine Road 3 will connect via a roundabout into the completed Road 1 to the east constructed by Welsh Government which takes access from Welsh Road which is constructed as a priority junction in accordance with the Welsh Government application 054488 (approved 01/03/2016). The junction arrangement includes right turn restrictions for general traffic egressing from the development site onto Welsh Road with a bus right turn only proposed. Road 3 will also connect

Transport Assessment

into the Corus access road on the PNGGL owned land via a proposed roundabout which connects onto Welsh Road at a priority junction. Road 2 of the Commercial Spine Road will also provide a public transport link into the Deeside Industry Park. Linking the Airfield site with the adjacent former Corus Garden City site will aid comprehensive delivery of this mixed use development which will meet with the policy objectives of the Northern Gateway Strategic Mixed Use Development site allocated under Policy HSG2A in the Flintshire UDP (2011).

3.3.7 Arcadis have prepared a Transport Implementation Strategy (TIS) to support the reserved matters for the Commercial Spine Road. This demonstrates that this road, including the propose internal road junction and the two priority junctions and points of access into the Northern Gateway site onto Welsh Road linked by the Commercial Spine Road 3 are all forecast to operate within capacity during the AM and PM peak periods. This assumes full buildout of the consented developments across all the Northern Gateway strategic allocated site (including the proposed trips associated with the ICT Paper Mill Facility) establishing a robust, viable vehicle access strategy for the Site. Further details of this Transportation Assessment is set out in Section 5 of this report.

Public Transport

3.3.8 The proposed Commercial Spine Road and connecting completed Road 1 and Corus road are all designed to allow bus penetration into the Site and provide linkages through the wider Northern Gateway Site and into Deeside Industrial Park. A Bus Hub / Interchange is also proposed on land within the former Corus Garden City part of the Northern Gateway site immediately adjacent to the junction on to Welsh Road. This will be constructed and delivered by Flintshire CC and will improve public transport connections through the Northern Gateway site.

Off-Site Highways

3.3.9 In April 2021 CHEL secured approval of details reserved by condition no. 28 (schedule of highway works) attached to planning permission ref. 058990, which confirmed details of specific improvements and mitigation measures required on existing roads and off-site junctions to mitigate the effect of cumulative development traffic flows across the whole Northern Gateway site, which were triggered by development on the Airfields site. This included details of off-site highway improvements as follows:

- Drome interchange with the A548 (the scheme shall include details of timing, priorities and queue detection) plus the widening to two lanes of the A494 northbound off slip at the Drome interchange with the A548;
- Installation of traffic signals on the A494 northbound and southbound off slips at the Queensferry interchange with the A550 (the scheme shall include details of timing, priorities and queue detection);

Transport Assessment

- The reconfiguration of the existing merge arrangement on the southbound carriageway of the A494 between the Drome interchange and the River Dee.
- Installation of traffic signals on the A494 northbound and southbound off slips at the Deeside Industrial Park interchange with the A548 (the scheme shall include details of timing, priorities and queue detection);
- A548 Shotwick Road/Parkway Roundabout junction improvement.

3.3.10 These works are now being undertaken in accordance with the details discharged and no further off-site mitigation works will be required.

4.0 Accessibility by Sustainable Transport

4.1 Introduction

4.1.1 A key element of national and local policy is to ensure that new developments are located in areas where alternative modes of travel are available. It is important to ensure that developments are not isolated but are located close to complementary land uses. This supports the aims of integrating planning and transport, providing more sustainable transport choices, and reducing overall travel and car use.

4.1.2 The accessibility of the proposed development is considered in this context for the following modes of travel:

- Pedestrian accessibility;
- Cycle accessibility; and,
- Public transport.

4.2 Pedestrian Accessibility

4.2.1 Research has indicated that acceptable walking distances depend on a number of factors, including the quality of the development, the type of amenity offered, the surrounding area, and other local facilities. The Chartered Institution of Highways and Transportation (CIHT) document entitled 'Providing for Journeys on Foot' suggests walking distances which are relevant to this planning application. These are reproduced in **Table 4.1**.

CIHT Classification	Town Centres (m)	Commuting/School/Sightseeing (m)	Elsewhere/Local Services (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200

Table 4.1 – CIHT Recommended Walking Distances

4.2.2 To assist in summarising the accessibility of the site by foot, an indicative pedestrian catchment plan has been produced. **Plan 079407-CUR-00-XX-DR-TP-06003-P01** shows distances of 500m, 1,000m and 2,000m which are termed 'Desirable', 'Acceptable' and the 'Preferred Maximum' by the CIHT for commuting trips, which are likely to be the most significant categories of trips generated by the proposed employment development. Figure 4.1 below illustrates the catchment area.

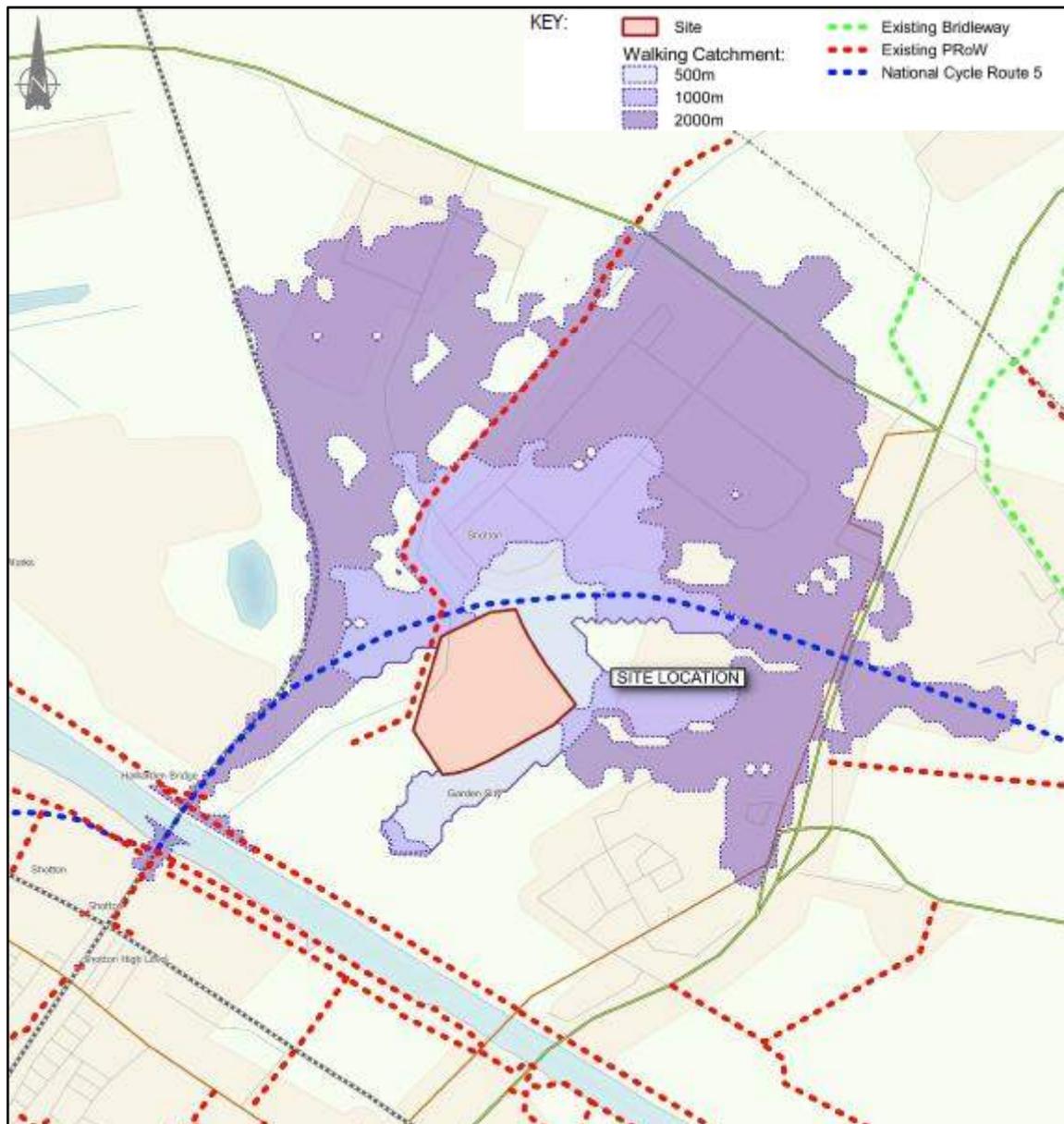


Figure 4.1 – Walking catchment

4.2.3 The surrounding industrial land uses around the development location and the pre-existing residential areas in Deeside ensures that the site is situated adjacent to potential site users and with good levels of pedestrian infrastructure as well as public amenities.

Transport Assessment

- 4.2.4 Most notably the Welsh Road bridge which is located within close proximity, connects the site with the adjacent commercial and leisure area, as well as the large residential areas in the surrounding neighbourhoods
- 4.2.5 It is evident from Figure 4.1 that the site is located within an acceptable walking distance of the large existing residential area of Garden City and Shotton. This puts amenities such as the Garden city post office, Sealand primary school, Natwest and HSBC bank services as well as Lidl in close proximity to the site. This reduces the need for car travel to access essential facilities. The Deeside Leisure centre which lies south of the site provides leisure opportunities for future employees.
- 4.2.6 Two bus stops along the B5441 are both located within walking distance of the development. Additionally, Hawarden Bridge Railway Station is located within the 2km walk catchment to north-west of the site.

4.3 Accessibility by Cycle

- 4.3.1 In order to assist in assessing the accessibility of the site by cycle an 8km cycle catchment for the site has been considered. Plan 079407-CUR-00-XX-DR-TP-06003-P01 presents an 8km cycle catchment for the site. This equates to a journey time of around 40 minutes, cycling at a speed of 12kph. Figure 4.2 below illustrates the catchment area.

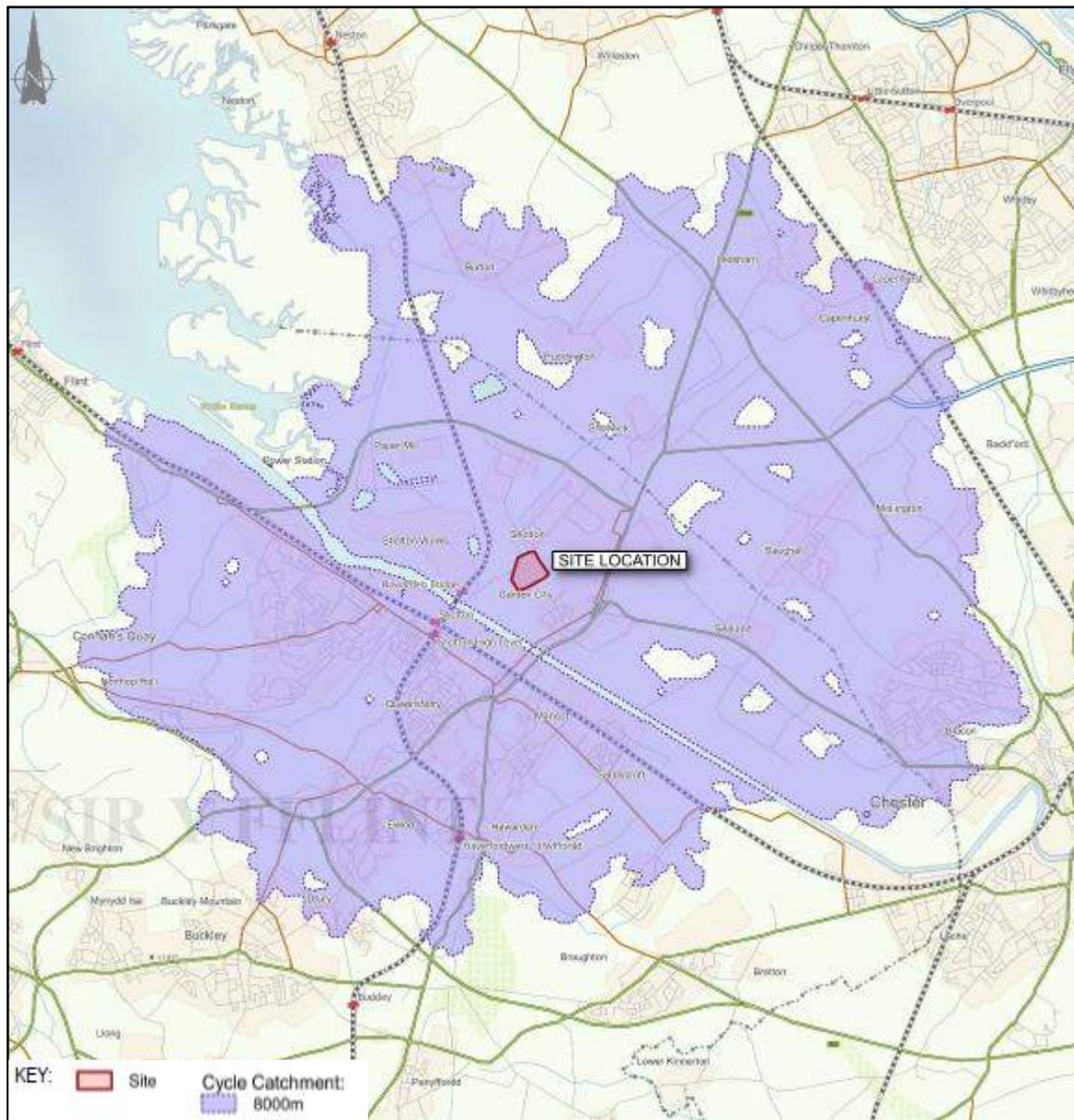


Figure 4.2 – Cycle catchment

- 4.3.2 The catchment extends as far as Nest Botanic Gardens in the north, Shotwick and Capenhurst to the east, Hawarden and Ewloe to the south and Northop to the west.
- 4.3.3 As mentioned in Section 2 the immediate road B5441 running parallel the site has existing cycle facilities with shared foot/cycleway which is set back from the carriageway thus providing a safe, traffic free and convenient route for cyclist (and pedestrians) accessing the site to and from the surrounding residential areas.

Transport Assessment

- 4.3.4 The wider local highway network in the vicinity of the site is predominately residential in nature, lightly trafficked with low vehicular speeds. Therefore, where specific cycle provisions are not provided the majority of the local roads are suitable for cycling.
- 4.3.5 The proposed development is therefore ideally placed to take advantage of the cycle connections around Deeside. In summary, it is considered that cycling is a highly realistic mode of travel for future employees at the proposed development site.

4.4 Public Transport Accessibility

- 4.4.1 The site is well situated to take advantage of existing public transport infrastructure. **Plan 07-CUR-00-XX-DR-TP-06005-P01** demonstrates the areas accessible via public transport within 20, 40 and 60 minutes of the site. Figure 4.3 below illustrates the public transport catchment.

Transport Assessment

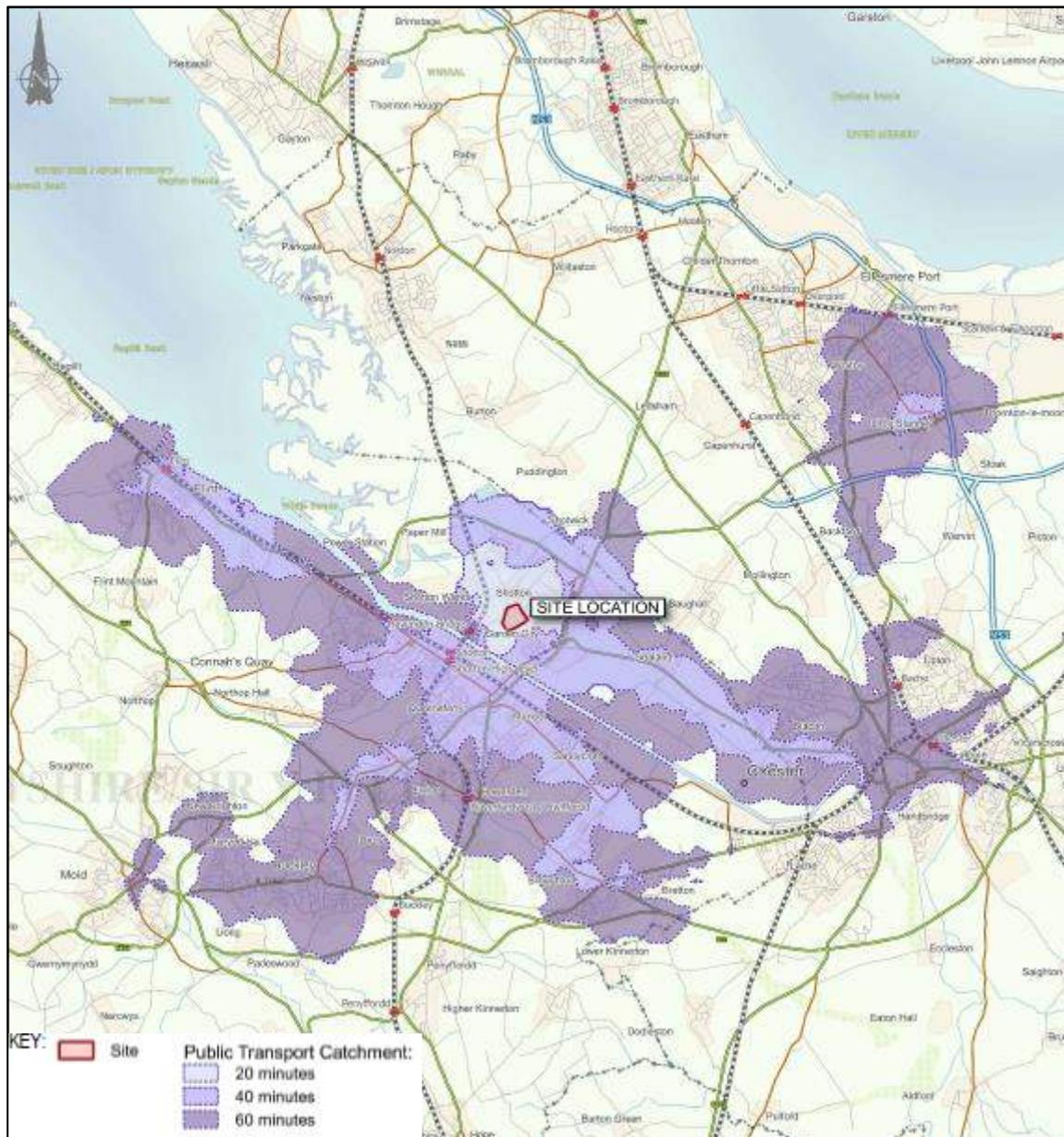


Figure 4.3 – Public transport catchment

4.4.2 It is evident from Figure 4.3 that within 20 minutes travel, access can be gained to Garden City, Shotton and parts of Queens Ferry. Within 40 minutes access can be gained to Shotwick, Shotton, Ewloe, Buvckley and surrounding areas. Within 60 minutes of public transport travel, access can be gained to Holywell and Mold to the west, Birkenhead to the north, Frith and Lache to the south and Dunham-on-the-hill to the east.

4.4.3 Accessibility by bus and rail are considered in further detail below.

Transport Assessment

Bus

4.4.4 The Chartered Institution of Highways and Transportation (CIHT) document, 'Planning for Public Transport in Developments' recommends that developments should ideally be located within 400m of a bus stop. The nearest bus stop is located on B5441 Welsh Road which is approximately 800m from the centre of the site.

4.4.5 A summary of the existing service bus service is provided in **Table 4.2** below.

Bus Service	Journey	Frequency		
		Monday to Friday	Saturday	Sunday
5	Mold – Deeside – Ellesmere Port	60 mins	60 mins	N/A
8	Mold – Sealand Manor	120mins	120mins	N/A
D1	Connah's Quay - Garden City-DIP	60mins	60	60
10/10A	Flint – Connah's Quay -Chester	30 mins	30 mins	60 mins

Table 4.2 –Bus Service Summary

4.4.6 Table 4.2 confirms that there are frequent bus services within acceptable walking distance of the site to the destinations identified in Figure 4.3 above.

4.4.7 In summary, it is considered that the site is accessible by bus services.

Rail

4.4.8 The Chartered Institution of Highways and Transportation (CIHT) document, 'Planning for Public Transport in Developments' notes that visitors travelling to a site by rail will typically be prepared to walk further to the site than visitors travelling by bus, with a preferred distance of 800m. Hawarden Rail Station is located approximately 1.2km from the site.

4.4.9 The distance from the site to the railway station is within the preferred maximum walking distance for commuting trips and is likely to be viable for some employees and visitors. It could also be used as part of multimodal journey for employees that are unable walk longer.

4.4.10 Hawarden rail station is well served with services that operate every hour each way (Monday to Saturday daytime) between Wrexham Central and Bidston. On weekday evenings & bank holidays, the frequency drops to two-hourly and on Sundays there are six departures each way. Passengers can

change at Bidston for Liverpool, Shotton for North Wales, Chester, and Manchester Piccadilly and at Wrexham General for Shrewsbury, Birmingham New Street, Hereford and South Wales.

4.4.11 In addition to the public transport opportunities highlighted above, the Deeside Plan published in 2018 proposed the establishment of two new railway stations: Deeside Parkway and Broughton Parkway, in proximity to the site (shown in Figure 4.4) below in order to improve transport services and the connectivity of Deeside.

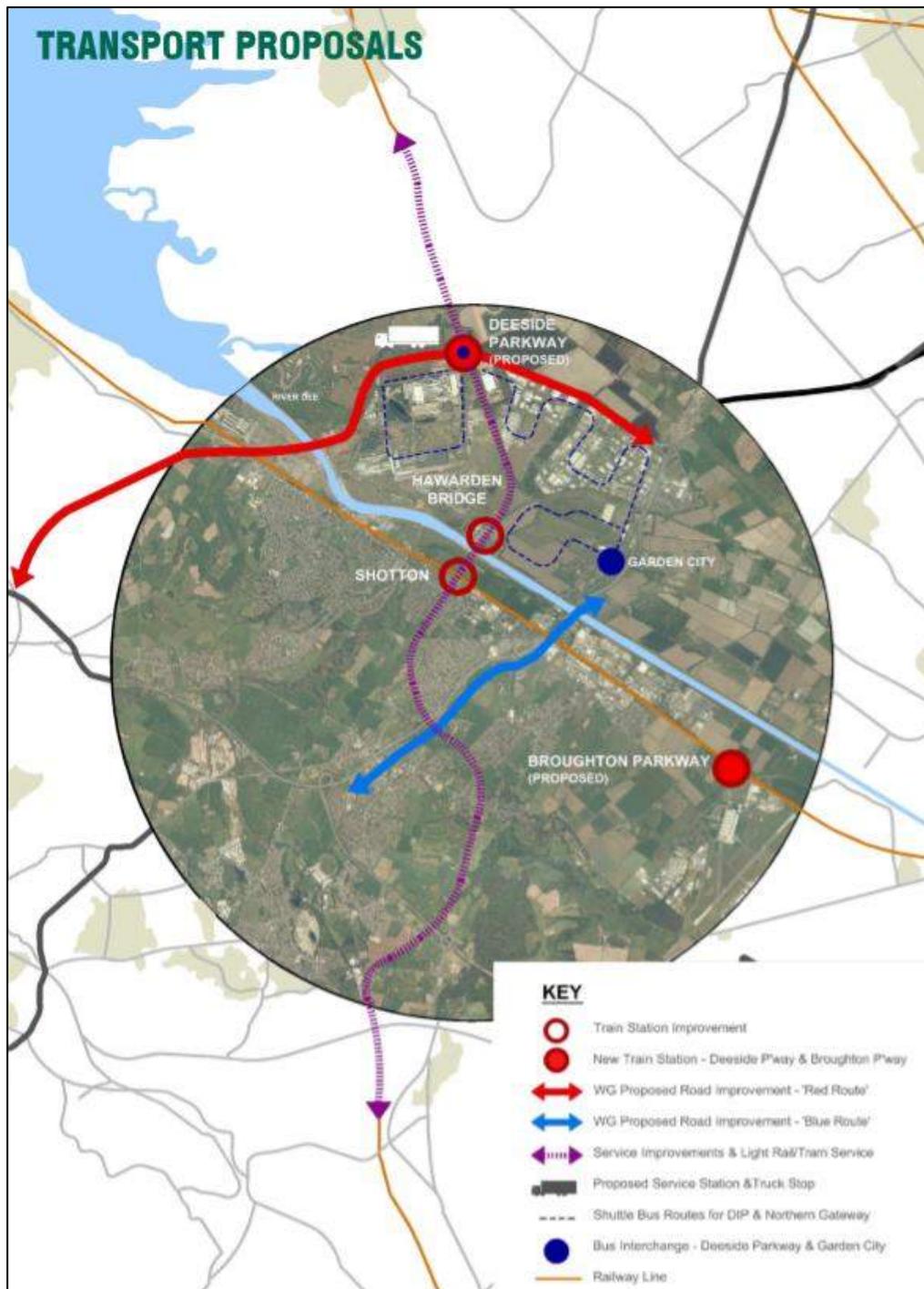


Figure 4.4 – Proposed new rail stations. Source: Deeside Plan

4.4.12 The Deeside Plan also proposes to maximise Park and Share facilities to assist in targeting congestion whilst providing commuters with additional multi-modal transport options. Instead of car-sharing from the start of a journey, commuters can meet at a convenient location and continue to their destination in

one vehicle. This further encourages multi-modal and sustainable transport patterns which could benefit future employees of the proposed development.

4.5 Summary

4.5.1 In summary, the Site is located such as to benefit from existing walking, cycling and public transport opportunities. The site is located in close proximity to a variety of key services and facilities as well as a number of pre-existing residential areas. The site is therefore considered to be accessible from sustainable modes of travel in line with national and local transport planning policy.

5.0 Highway Impact Assessment

PGNGL Site (Curtins Transport Assessment)

5.1.1 Curtins previously prepared a Transport Assessment on behalf of PGNGL, in support of the Northern Gateway mixed use scheme in September 2012.

5.1.2 The scheme considered at that time comprised the following uses;

- B2/B8 – Industrial/Warehousing 120,000sqm
- B1a – Office 3,300sqm
- B1c – Light Industrial 7,400sqm
- C1 – Hotel 3,000sqm
- A1 – Local Retail 2,500sqm
- C2/D1 – Training & Skills Centre 4,000sqm
- C3 – Residential 600 dwellings

5.1.3 It was agreed with Highway Officers at FCC and the Welsh Government (WG) that the following junctions would be considered as part of a detailed traffic impact assessment;

- A548 Shotwick Road/Parkway (roundabout);
- DIP Interchange (grade separated roundabout);
- Drome Corner eastern dumb-bell (roundabout);
- Drome Corner western dumb-bell (roundabout);
- Sealand Avenue/B5441 Welsh Road (priority);
- Farm Road/B5441 Welsh Road (priority);
- Corus Access/B5441 Welsh Road (priority);
- Chester Road/B5441 Welsh Road/ASDA Access (signals);
- A550/A494 (grade separated roundabout).
- Evans Way/Chester Road East (signals);
- Chester Road East/Ketland Close/Shotton Lane (signals);
- High Street/Wepre Drive (signals); and
- Welsh Road/Parkgate Road (signals).

5.1.4 The RAF Sealand site now referred to as the Airfields (CHEL) was considered as a committed development and comprised the following uses:

- A1 – Retail 4,646sqm
- B1 – Office 7,544sqm

Transport Assessment

- B2 – Industrial 10,959sqm
- B8 – Warehousing 205,000sqm
- Sui Generis 7,778sqm
- C3 – Residential 725 dwellings

5.1.5 The highway network was subjected to detailed capacity assessments up to a future design year of 2022.

5.1.6 It was determined that the proposed development would have no material traffic impact on the majority of junctions within the study area.

5.1.7 Of the junctions that were identified as operating above capacity following the completion of the proposed scheme, potential infrastructure improvements were identified which mitigated the impact of the scheme.

5.1.8 Following submission of the Transport Assessment, comments were received from both FCC and transport consultants acting on behalf of CHEL, Vectos.

5.1.9 Curtins therefore prepared a Transport Assessment – Addendum in November 2013 in response to comments received and provided additional details above that contained within the original TA.

5.1.10 Based on the information presented within the Addendum report, through the adoption of base traffic flows submitted in the agreed Vectos TA, Curtins identified the requirement for infrastructure improvements at the following junctions in order to mitigate the traffic impact of the PGNGL and CHEL schemes;

- A548 Shotwick Road/Parkway (roundabout);
- DIP Interchange (grade separated roundabout);
- Drome Corner eastern dumb-bell (roundabout);
- Drome Corner western dumb-bell (roundabout);
- Chester Road/B5441 Welsh Road/ASDA Access (signals); and
- A550/A494 (grade separated roundabout).

5.1.11 The traffic impact and the proposed mitigation measures that were identified were comparable with the proposals set out as part of the approved CHEL development application which was supported by the Vectos TA.

5.1.12 Based on the updated findings of the Addendum, it was considered that the results of the revised highway impact assessments were consistent with the findings of the agreed Vectos TA.

Transport Assessment

- 5.1.13 A S73 application was subsequently submitted to revise the consented outline scheme, through the variation of planning condition 5, increasing the level of residential development on the site, which refers to a maximum of 600 dwellings to 770 dwellings, a total increase in 170 dwellings.
- 5.1.14 The revised scheme proposed to maintain the current level of employment uses stipulated in Condition 5 of the previous S73 permission (054758) and there were no further changes to this element of the proposed development approved in outline.
- 5.1.15 More pertinent to this reserved matter application, the traffic impact assessments concluded that the Corus access/Welsh Road priority controlled junction would continue to operate within capacity following 100% completion of the development and would not require any infrastructure improvements.

CHEL Site (Vectos Transport Assessment)

- 5.1.16 Vectos prepared a Transport Assessment on behalf of CHEL in support of the Former RAF Sealand Site, Deeside in January 2012.
- 5.1.17 The anticipated highway impacts of the development were assessed using a Paramics model which tested the network during the morning and evening peak periods.
- 5.1.18 The development scenarios modelled include the RAF Sealand (South) Camp Site and the full illustrative Masterplan site.
- 5.1.19 Table 5.1 summarises the total development traffic for the outline

Land Use	AM Peak			PM Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
A1 Retail	114	103	217	135	139	274
B1 Office	131	17	148	16	107	123
B2 Industrial	54	11	65	6	46	52
B8 Warehousing	98	55	154	49	88	137
Sui Generis	49	18	66	20	43	63
C3 Residential	104	320	423	272	148	420
Total	550	523	1074	498	572	1070

Table 5.1 – CHEL Site Traffic (Approved Traffic Envelope)

- 5.1.20 Table 5.1 shows that the outline approval for the CHEL Site has a traffic envelope of 1074 two-way traffic movements in the AM peak and 1070 two-way movements in the PM peak.
- 5.1.21 The model has enabled identification of potential stress points on the highway network, for which the following potential mitigation measures were identified:

Transport Assessment

- Welsh Road main spine road access priority junction, designed to prevent right turn out for traffic apart from buses;
- A548 Shotwick Road/Parkway roundabout partial signalisation;
- A550/A548 Shotwick Road grade separated roundabout interchange partial signalisation;
- A550/Welsh Road/ Sealand Road/Drome West roundabout partial signalisation;
- A550/A494/Chester Road grade separated roundabout junction partial signalisation and alteration to the northbound approach to the Station Road signal junction with Chester Road West; and
- A550 southbound changes to mainline merge and southbound merge at Drome Interchange to reduce conflicts.

5.1.22 The Vectos TA concluded that there are no overriding transport reasons that would prevent the grant of consent for the proposed development on the Airfields RAF Sealand (South) Camp Site and that transport stakeholders should see this development in a positive light given its suitable transport credentials.

5.2 Trigger Points for Off-site highway Works

5.2.1 Following outline planning approval, Curtins worked in collaboration with Vectos to develop a strategy for bringing forward the agreed off-site highway works required to deliver the major mixed-use development proposals at the northern Gateway site.

5.2.2 The strategy draws upon work completed by both Curtins and Vectos identifying the levels of trip generation on the site that would trigger the requirement to deliver the off-site highway works. For ease, the Strategy Note, which has already been submitted by Vectos, is provided in Appendix B.

5.2.3 The Strategy Note sets out the requirements for highway improvements over two packages of mitigation works as follows;

Mitigation 1

- Installation of part-time traffic signals on the A494 northbound off slip at the Drome interchange with the A548 (the scheme shall include details of timing, priorities and queue detection) plus the widening to two lanes of the A494 northbound off slip at the Drome interchange with the A548;
- Installation of traffic signals on the A494 northbound and southbound off slips at the Queensferry interchange with the A550 (the scheme shall include details of timing, priorities and queue detection);
- The reconfiguration of the existing merge arrangement on the southbound carriageway of the A494 between the Drome interchange and the River Dee.

Transport Assessment

Mitigation 2

- Installation of traffic signals on the A494 northbound and southbound off slips at the Deeside Industrial Park interchange with the A548 (the scheme shall include details of timing, priorities and queue detection);
- A548 Shotwick Road/Parkway Roundabout junction improvement.

5.2.4 The Strategy Note confirms that Mitigation 1 works are required for the following levels of Northern Gateway site development trips:

- AM Peak – 97 arrivals, 155 departures (rounded to 250 two-way trips);
- PM Peak – 173 arrivals, 139 departures (rounded to 300 two-way trips).

5.2.5 It is recommended that two-way trips are adopted for the trigger point assessments to keep the approach straightforward, with the trips rounded down for robustness.

5.2.6 Once the above trip generations have been reached there would be a requirement to deliver the Mitigation 1 Highway Works.

5.2.7 The Strategy Note concluded that no further mitigation works are required up to the following trip generation levels:

- AM Peak – 191 arrivals, 309 departures (rounded to 500 two-way trips);
- PM Peak – 309 arrivals, 248 departures (rounded to 550 two-way trips).

5.2.8 However, once the two-way trips set out above are exceeded there would be a requirement to deliver the Mitigation 2 works summarised above.

5.2.9 As previously stated, the above mitigation works are now being undertaken as part of planning conditions attached to planning permission ref: 058990.

5.3 Scope of Assessment

5.3.1 The highways and transportation impact of the ICT UK Ltd Paper Mill Facility has been established and accepted by Highway Officers at FCC as part of the outline planning permission associated with the wider Northern Gateway mixed use development proposal (ref: 054758).

5.3.2 As part of the outline planning permission, a package of off-site highway works has been developed that will mitigate the traffic impact of the comprehensive Northern Gateway development. The delivery mechanism has also been established and is based on the cumulative traffic generations of future reserved matters applications.

Transport Assessment

5.3.3 The Transport Assessment will derive the future traffic demand of the ICT scheme and quantify the two-way peak hour trips.

5.3.4 The trip demand will then be considered as part of a cumulative assessment incorporating any further reserved matters consents across the wider Northern Gateway Strategic Site and compared with the agreed traffic envelope for the Northern Gateway sites.

5.4 Enabling Works - Development of Road 2 and Road 3 Vehicle Access

5.4.1 ARCADIS produced a Transport Technical Note in support of the Road 2 and 3 highway infrastructure works that will facilitate and support the consented developments for the Northern Gateway sites. The proposed works consists of 5 junctions and 3 highway sections.

5.4.2 Figure 5.1 below illustrates the Road 2 and 3 highway infrastructure works.



Figure 5.1 – Phase 2 and 3 Enabling Works

5.4.3 Access to the proposed development will be achieved from the junctions illustrated on the above.

5.4.4 As part of the Technical Note the following traffic was assessed for both the CHEL site and the PNGGL sites. Tables 5.2 and 5.3 details the CHEL and PNGGL site respectively.

Transport Assessment

- Phase 3 150 staff
- Total upon completion 422 staff

5.5.3 The shift patterns identified are summarised below;

- 06:00am – 14:00pm
- 14:00pm – 22:00pm
- 22:00pm – 06:00am
- 08:00am – 17:00pm

5.5.4 Table 5.4 summarises the shift pattern and associated staff per each phase of the development.

Shift Time	Phase			Total
	Phase 1	Phase 2	Phase 3	
0600-1400	54	10	46	110
1400-2200	53	11	46	110
2200-0600	50	10	44	104
0800-1700	67	11	15	98
Total	229	42	151	422

Table 5.4 – Phase and Number of Staff

5.5.5 It is evident from Table 5.4 that majority of the shift changes occurs outside the traditional AM and PM peak hours. For the purpose of this assessment, it has been assumed that the staff who work 0800-1700 will arrive during the AM peak and depart during the PM peak. Table 5.3 confirms that 98 people work during this period.

5.5.6 To derive the modal share of people travelling to the site, Curtins has used journey to work by mode data based on the 2011 census from the output area “*Flintshire 007 and 008*”. The output areas used is highlighted in Figure 5.2 below.

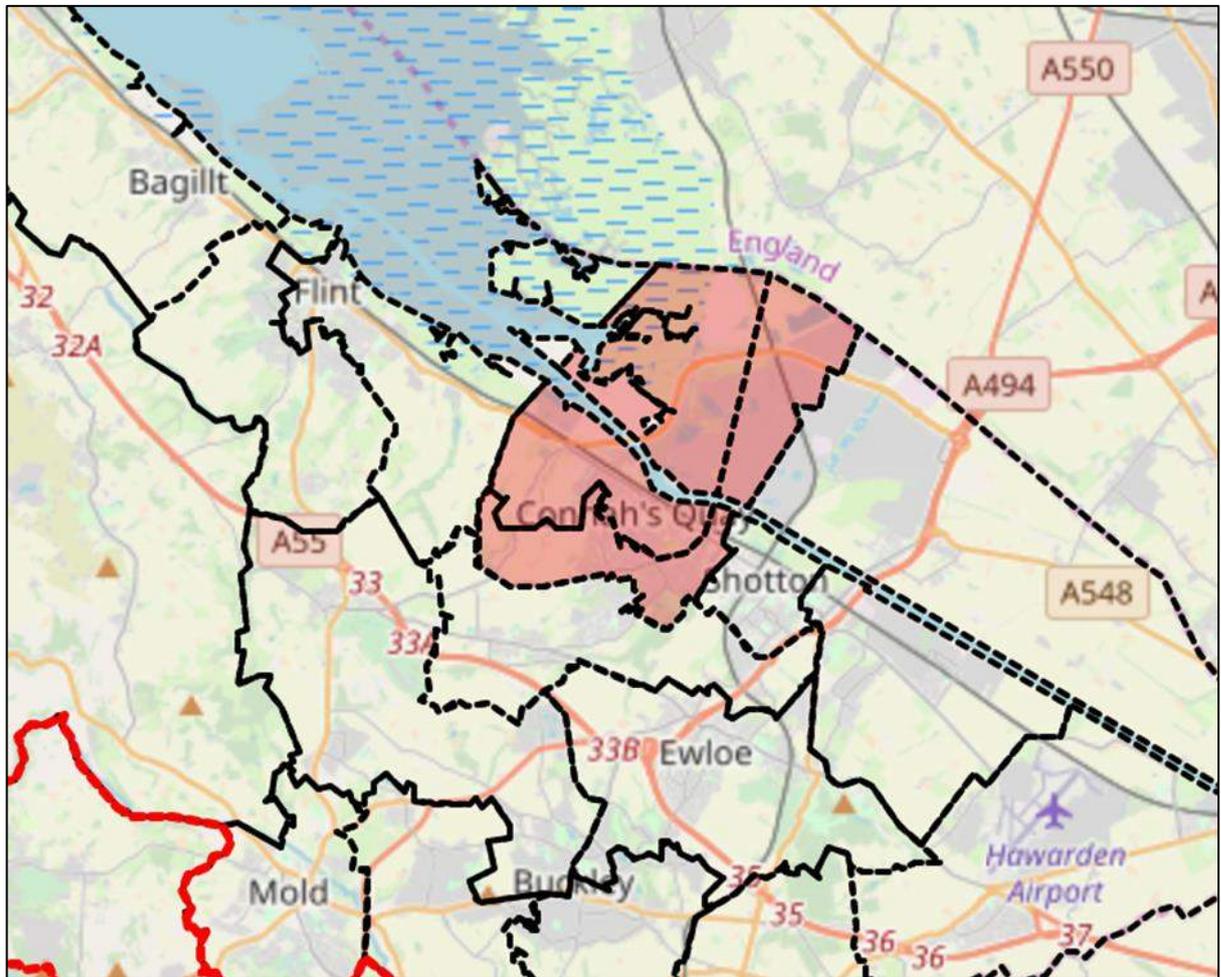


Figure 5.2 – Employment Zones Used for Mode Share Derivation

5.5.7 The data extracted from the output areas is summarised in Table 5.5 below.

Number of People	Flintshire 007	Flintshire 008	Total
	Number of People	Number of People	
Underground, metro, light rail or tram	1	4	5
Train	5	66	71
Bus, minibus or coach	69	490	559
Taxi	23	47	70
Motorcycle, scooter or moped	19	116	135
Driving a car or van	1226	8655	9881
Passenger in a car or van	117	909	1026
Bicycle	51	318	369

Transport Assessment

On foot	197	587	784
Other method of travel to work	0	30	30
Total	1708	11222	12930

Table 5.5 – Mode of Travel to Work

5.5.8 The mode of travel has been further refined by combining the travel by tram, train and bus/coach as public transport. For a robust assessment, the taxi and other method of travel to work category has been added to the car driver category. The resulting mode share for each mode of travel has been derived and summarised in Table 5.6.

Mode	Number of People	Percentage
Public Transport	635	5%
Car Driver	9981	77%
Motorcycle, scooter or moped	135	1%
Passenger in a car or van	1026	8%
Bicycle	369	3%
On foot	784	6%
Total	12930	100%

Table 5.6 – Derived Mode share

5.5.9 Using the above mode share, the likely staff traffic for each phase has been summarised in Table 5.7 below.

Mode	Phase 1	Phase 2	Phase 3	Total
Public Transport	4	1	1	5
Car Driver	55	8	12	75
Motorcycle, scooter or moped	1	0	0	1
Passenger in a car or van	6	1	1	8
Bicycle	2	0	0	3
On foot	4	1	1	6
Total	72	11	15	98

Table 5.7 – Staff Mode share per phase.

5.5.10 Table 5.7 confirms that there will be circa 75 vehicles arriving at the site in the AM peak and departing the site in the PM peak when fully completed. It is evident from Tables 5. 3 and 5.4 that majority of employees will be arriving and departing the site by car and that the combination of car drivers and car occupants accounts for approximately 85% of employee travel.

Transport Assessment

HGV Movements

5.5.11 ICT has provided the likely daily HGV movements associated with the proposed development. This is summarised in Table 5.8 below for all the development phases.

HGV	Phase 1	Phase 2	Phase 3
Good receipt from vendor/harbour of pulp	12	25	37
Good receipt from vendor of raw materials PM	1	2	2
Shipping of jumbo for B2B customer	6	6	7
Intercompany goods receipt of jumbo	16	0	0
Good receipt of empty pallet	8	8	16
Good receipt from vendor of RM Converting	5	5	10
Others truck	2	3	5
Shipping of finished goods from HBW and TW	65	65	106
Total Daily	115	114	183
Hourly HGV Movements (12 Hour Day)	10	10	15

Table 5.8 – Daily HGV Movements

5.5.12 Table 5.8 confirms that Phase 1 will generate 115 (230 two-way) HGV trips to the site per day with Phases 2 and 3 generating 114 (230 two-way) and 183 (366 two-way) HGV trips respectively.

5.5.13 The above confirms that the Proposed Development could generate up to 366 HGV movements per day when fully completed. Whilst the Site will be operational for 24 hours a day, it is envisaged that 5% of the HGV trips will be undertaken during the night (10pm-6am) as part of ICT's operational requirements.

5.5.14 For the purpose of this assessment, it has been assumed that the above HGV movements will occur over a 12-hour period. Dividing the HGV trips by 12 indicates the proposed development will generate 10 HGV trips in Phase 1, 10 in Phase 2 and 15 in Phase 3 for both the AM and PM peak hour. For the purposes of this assessment, it has been assumed that HGV trucks will enter and exit the site within the same hour.

5.5.15 On the above basis the potential vehicle trips associated with the proposed development for each phase are summarised in Table 5.9.

Transport Assessment

	LGV			HGV		
	Arrive	Depart	Total Vehicles	Arrive	Depart	Total Vehicles
Phase 1						
AM Peak	55	0	55	10	10	20
PM Peak	0	55	55	10	10	20
Phase 2						
AM Peak	8	0	8	10	10	20
PM Peak	0	8	8	10	10	20
Phase 3						
AM Peak	12	0	12	15	15	31
PM Peak	0	12	12	15	15	31
Total Development						
AM Peak	75	0	75	15	15	31
PM Peak	0	75	75	15	15	31

Table 5.9 – ICT Trip Generation

5.5.16 Based on Table 5.8, the two-way traffic associated with each phase is summarised as follows:

Phase 1

- AM Peak – 65 arrivals, 10 departures (rounded to 75 two-way trips);
- PM Peak – 10 arrivals, 65 departures (rounded to 75 two-way trips).

Phase 2

- AM Peak – 18 arrivals, 10 departures (rounded to 28 two-way trips);
- PM Peak – 10 arrivals, 18 departures (rounded to 28 two-way trips).

Phase 3

- AM Peak – 27 arrivals, 15 departures (rounded to 43 two-way trips);
- PM Peak – 15 arrivals, 27 departures (rounded to 43 two-way trips).

Completed Development

- AM Peak – 90 arrivals, 15 departures (rounded to 106 two-way trips);
- PM Peak – 15 arrivals, 90 departures (rounded to 106 two-way trips).

5.5.17 The above confirms that the proposed development will generate 106 two-way movements in both the AM and PM peaks. This is less than the quantum of trips used by ARCADIS when assessing the impact of the Phases and 3 infrastructure works.

Transport Assessment

5.6 Cumulative Impact of ICT Traffic

- 5.6.1 It is understood that other than the wider development uses which forms part of the Northern Gateway Strategic Mixed Use Development site allocated under Policy HSG2A in the Flintshire UDP (2011), there are no further committed developments to be considered as part of the planning submission.
- 5.6.2 The Transport Assessment will therefore take account of the outline planning permission (ref: 054758) for an employment led mixed use development in May 2014 and subsequently varied with a Section 73 application in March 2018 (ref: 056540).
- 5.6.3 In addition, the Transport Assessment will also give consideration to the existing Airfields Site, which was formerly the RAF Sealand 'South Camp' borders the Site to the north. This forms the remainder of the Northern Gateway allocation in the Flintshire UDP and has outline planning permission for a mixed use development (ref: 049320) granted in January 2013.

App Ref: 061585 - Submitted July 2020

- 5.6.4 A Reserved Matters application was submitted by Lane End Developments Construction Ltd in July 2020 to develop one of the first plot within the PGNGL Northern Gateway site. The development description is set out below;

“Application for approval of reserved matters following outline approval (059635) for the erection of 104 dwellings.”

- 5.6.5 The application is currently undecided. The planning application was supported by a Transport Assessment (TA) prepared by Curtins, dated 15th March 2020. The TA provided an analysis of the anticipated traffic demand associated with the application proposals for 104 residential units and presented the following for the AM and PM peak hour periods;

	Arrivals	Departures	Two-way
AM Peak Hour	14	44	58
PM Peak Hour	38	20	58

Table 5.10 – App Ref: 061585 Anticipated Trip Demand

- 5.6.6 Table 5.10 confirms that the Lane End application will generate 58 two-way movements in both the AM and PM peaks.
- 5.6.7 The TA assessed that the cumulative traffic impact of the development with other approved reserved matters exceeded the threshold for Mitigation 2. However, the approval of App Ref: 060899 ensures that all required off-site highway improvements required to facilitate the full delivery of the Northern Gateway proposals will be implemented prior to the completion of the development of the application site and therefore no further mitigation was proposed.

Transport Assessment

App Ref: 060411 - Submitted September 2019

5.6.8 A Reserved Matters application was submitted by Keepmoat Homes in September 2019 to develop the first plot within the PGNGL Northern Gateway site. The development description is set out below;

“Application for approval of reserved matters following outline approval (056540) for the erection of 129 no. dwellings.”

5.6.9 It is understood that the application has a resolution to grant subject to the signing of a legal agreement.

5.6.10 The planning application was supported by a Transport Assessment (TA) prepared by Curtins, dated 5th April 2019. The TA provided an analysis of the anticipated traffic demand associated with the application proposals for 129 residential units and presented the following for the AM and PM peak hour periods;

	Arrivals	Departures	Two-way
AM Peak Hour	18	56	74
PM Peak Hour	47	26	73

Table 5.11 – App Ref: 060411 Anticipated Trip Demand

5.6.11 Table 5.11 confirms that the Keepmoat Homes development would generate 74 two-way movements in the AM peak and 73 two-way movements in the PM peak.

5.6.12 The TA concluded that the traffic generation is approximately 30% of the AM peak trigger level and 24% of the PM peak trigger levels for off-site highway works.

App Ref: 059514 - Submitted February 2019

5.6.13 A Reserved Matters application was submitted on behalf of Countryside Properties PLC in February 2019 to develop the first plot within The Airfields site. The development description is set out below;

“Application for approval of reserved matters following outline approval for the erection of 283 no. dwellings.”

5.6.14 It is understood that the application has a resolution to grant subject to the signing of a legal agreement.

5.6.15 The planning application was supported by a Transport Implementation Strategy (TIS) prepared by Vectos, dated January 2019. The TIS provided an analysis of the anticipated traffic demand associated with the application proposals for 283 residential units and presented the following for the AM and PM peak hour periods;

Transport Assessment

	Arrivals	Departures	Two-way
AM Peak Hour	47	136	183
PM Peak Hour	108	63	171

Table 5.12 – App Ref: 059514 Anticipated Trip Demand

5.6.16 Table 5.12 confirms that the Countryside Properties PLC development would generate 183 two-way movements in the AM peak and 171 two-way movements in the PM peak.

5.6.17 At the time of planning submission, Vectos had not considered any further applications as part of a cumulative assessment. On this basis, the Countryside Properties PLC development sat within the agreed traffic envelope and did not trigger the need for off-site highway works.

App Ref: 060222 - Submitted September 2019

5.6.18 A Reserved Matters application was submitted on behalf of Gleave Partnership Ltd in September 2019 to develop the first plot within The Airfields site. The development description is set out below;

“Application for the approval of reserved matters of access, appearance, landscaping, layout and scale for the erection of a warehouse (Use Class B8) with ancillary office accommodation (Use Class B1), associated car parking, van storage, cycle parking, pedestrian and vehicular access arrangements, landscaping and infrastructure works”.

5.6.19 The application was granted planning consent in August 2020.

5.6.20 The development proposals comprise a 9,200sqm GIA unit split between 8,190sqm B8 warehouse and 1,010sqm ancillary offices, with associated car parking (170 spaces including 7 disabled and 3 electric vehicle charging points), HGV and cycle parking and overnight van storage (for up to 473 vans).

5.6.21 The planning application was supported by a (TIS) prepared by Vectos, dated September 2019. The TIS provided an analysis of the anticipated traffic demand associated with the application proposals based on two-way movements supplied by the prospective occupier and presented the following for the AM ad PM peak hour periods;

	Arrivals	Departures	Two-way
AM Peak Hour	-	-	237
PM Peak Hour	-	-	311

Table 5.13 – App Ref: 060222 Anticipated Trip Demand

Transport Assessment

5.6.22 Table 5.13 confirms that the proposed scheme would generate 237 two-way movements in the AM peak and 311 two-way movements in the PM peak. Vectos noted that the traffic generation was sufficient to trigger the ‘Mitigation 1’ package of off-site highway works.

5.6.23 Vectos also considered the cumulative traffic impact of the Countryside Properties PLC development (App Ref: 059514) with the resultant traffic generations summarised in Table 5.14.

	Two-way Trips	
	AM Peak Hour	PM Peak Hour
Residential Development – 283 Dwellings (App Ref: 059514)	183	171
B1/B8 Development (App Ref: 060222)	237	311
Cumulative	420	482

Table 5.14 – Cumulative Trip Demand

5.6.24 Table 5.13 indicates that the cumulative traffic impact would results in 420 two-way trips in the AM peak and 482 two-way trips in the PM peak hour.

5.6.25 Whilst the cumulative traffic impact is sufficient to trigger the ‘Mitigation 1’ package of off-site highway improvements, the two-way movements do not trigger the need for the ‘Mitigation 2’ package of off-site highway improvements.

5.6.26 The following package of off-site highway works would therefore be delivered as part of application ref 060222;

- Installation of part-time traffic signals on the A494 northbound off slip at the Drome interchange with the A548 (the scheme shall include details of timing, priorities and queue detection) plus the widening to two lanes of the A494 northbound off slip at the Drome interchange with the A548;
- The reconfiguration of the existing merge arrangement on the southbound carriageway of the A494 between the Drome interchange and the River Dee.

5.6.27 The works would be delivered via a section 278 agreement under the Highways Act, with separate agreements required between FCC and Welsh Government.

App Ref: 060899 - Submitted January 2020

5.6.28 An application was submitted on behalf of CHEL in January 2020 to discharge condition 28 (part), of the original outline planning permission (App Ref: 058990) for employment led mixed use development at The Airfields site. For ease, condition 28 states:

Transport Assessment

“The development within each phase shall not commence until the Local Planning Authority has approved in writing full details of those works identified in the approved Schedule of Highway Works as being relevant to that particular phase and these works have been completed prior to the first occupation of any building within that particular phase, or in accordance with such other timescales as shall be agreed by the Local Planning Authority.”

- 5.6.29 The application was granted planning consent in September 2020. The application was supported by a Transport Statement prepared by Vectos, dated January 2020.
- 5.6.30 The Transport Statement did not provide any additional technical information beyond the cumulative traffic impact assessment presented as part of App Ref: 060222. However, the Transport Assessment acknowledged that the cumulative levels of two-way trips generated by recently approved applications would trigger the requirement for the delivery of the ‘Mitigation 1’ package of off-site highway works.
- 5.6.31 Furthermore, the levels of traffic are such that if further development comes forward on the site in a timely manner, then the ‘Mitigation 2’ package of off-site highways works would soon be required.
- 5.6.32 App Ref: 060899 therefore proposes to deliver all of the remaining off-site highway works at the same time.
- 5.6.33 Full details of the following proposed off-site highway improvements have been submitted in order to discharge Condition 28:
- Installation of part-time traffic signals on the A494 northbound off slip at the Drome interchange with the A548 (the scheme shall include details of timing, priorities and queue detection) plus the widening to two lanes of the A494 northbound off slip at the Drome interchange with the A548;
 - The reconfiguration of the existing merge arrangement on the southbound carriageway of the A494 between the Drome interchange and the River Dee;
 - Installation of traffic signals on the A494 northbound and southbound off slips at the Deeside Industrial Park interchange with the A548.
- 5.6.34 It is noted that completion of the above off-site highway works provides completion to all the off-site highway works required to facilitate full development of the Northern Gateway site.

Bellway Homes

- 5.6.35 Bellway Homes Ltd are seeking planning permission for 413 residential dwellings on Plot 4 of the PNGNL Site. Table 5.15 summarises the likely trips associated with this development.

Transport Assessment

	AM Peak			PM Peak		
	Arrival	Depart	Two-Way	Arrival	Depart	Two-Way
Trip Rates	0.143	0.441	0.584	0.375	0.204	0.579
Trips	59	182	241	155	84	239

Table 5.15 –Trip Generation – Plot 4 PGNGL Site

5.6.36 Table 5.15 confirms that the proposed development could generate 241 two-way movements in the AM peak and 239 in the PM peak. This represents 4 vehicle movement every minute.

5.7 Cumulative Development Impact (Northern Gateway)

5.7.1 Table 5.16 summarises the cumulative traffic for approved developments within the wider northern gateway site.

	Two-way Trips	
	AM Peak Hour	PM Peak Hour
Residential Development – 283 Dwellings (App Ref: 059514)	183	171
B1/B8 Development (App Ref: 060222)	237	311
Residential Development -126 Dwellings (App Ref: 060411)	74	73
Residential Development -104 Dwellings (App Ref: 061585)	58	58
Plot 4 – PGNGL – 413 Dwellings	241	239
Proposed ICT Traffic	106	106
Cumulative	899	958

Table 5.16 –Cumulative Traffic

5.7.2 Table 5.16 confirms that the cumulative traffic generations, including ICT would result in 899 two-way traffic movements in the AM peak and 958 two-way traffic movements in the PM peak. This level of cumulative impact triggers the implementation of Mitigation 2 measures.

5.7.3 The ICT traffic will amount to approximately 15% of the total traffic. On the above basis the impact of the ICT traffic is considered to be minimal.

5.7.4 The recent approval of App Ref: 060899 ensures that all required off-site highway improvements required to facilitate the full delivery of the Northern Gateway proposals will be implemented prior to the completion of the development of the application site and therefore no further mitigation is required.

5.8 Cumulative Traffic Impact for CHEL Site Only

5.8.1 Table 5.17 compares the agreed traffic level for the CHEL site with the traffic that has been approved from reserved matters application.

	Two-way Trips	
	AM Peak Hour	PM Peak Hour
Approved Traffic for CHEL Site		
Outline Approval	1074	1070
Reserved Matter Applications		
Residential Development – 283 Dwellings (App Ref: 059514)	183	171
B1/B8 Development (App Ref: 060222)	237	311
Proposed Development	106	106
Total	528	588
Difference	548	482
Percentage Outstanding	51%	45%

Table 5.17 – CHEL Site Cumulative Traffic

5.8.2 Table 5.17 confirms that the CHEL Site has permission to deliver developments with a total 1074 two-way traffic movements in the AM peak and 1070 in the PM peak. The cumulative traffic associated with the PNGGL sites that have submitted a reserved matters application including this development is 528 two-way movements in the AM peak and 588 in the PM peak.

5.8.3 Table 5.17 also confirms that 51% (548 two-way movements) of the approved PNGGL site in the AM peak has not yet been utilised with 45% (482 two-way movements) for the PM peak also outstanding.

5.9 Summary

5.9.1 It has been demonstrated that the Proposed Development could generate 106 two-way vehicle movements in both the AM and PM peaks. This is similar to that considered by ARCADIS as part of assessment for the Road 2 and Road 3 highway works. This assessment confirmed that the Corus Access Road/Welsh Road junction and the Welsh Road/Phase 1 Road junction have sufficient capacity to accommodate all the development traffic associated with the Northern Gateway sites.

5.9.2 The mitigation works identified as part of the outline applications have either been delivered or are currently being delivered and therefore no further offsite highway works required to facilitate this development.

6.0 Transport Planning Policy

6.1 Introduction

6.1.1 This section of the report sets out the key national and local traffic and transport policies that are relevant to this application.

6.2 Planning Policy Wales (Edition 11)

6.2.1 Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales.

6.2.2 Section 4 of PPW refers to Active and Social Places. The key themes in this section that are relevant to the proposed change of use are listed below:

- *“improve sustainable access to services, cultural opportunities and recreation facilities to support people to adopt healthy, culturally fulfilled lifestyles which will assist in improving health and wellbeing;*
- *reducing reliance on travel by private car, and the adverse impacts of motorised transport on the environment and people’s health, by prioritising and increasing active travel and public transport;*
and
- *require developments to encourage modal shift and be easily accessible by walking, cycling and public transport, by virtue of their location, design and provision of on and off site sustainable transport infrastructure.”*

6.2.3 Paragraph 4.11 of PPW states that:

“Development proposals must seek to maximise accessibility by walking, cycling and public transport, by prioritising the provision of appropriate on-site infrastructure and, where necessary, mitigating transport impacts through the provision of off-site measures, such as the development of active travel routes, bus priority infrastructure and financial support for public transport services. Importantly, sustainable transport infrastructure and services should be prioritised and put in place from the outset, before people have moved in and travel patterns have been established”.

6.2.4 **Figure 6.1** shows the sustainable transport hierarchy for planning as set out in Figure 9 of PPW.

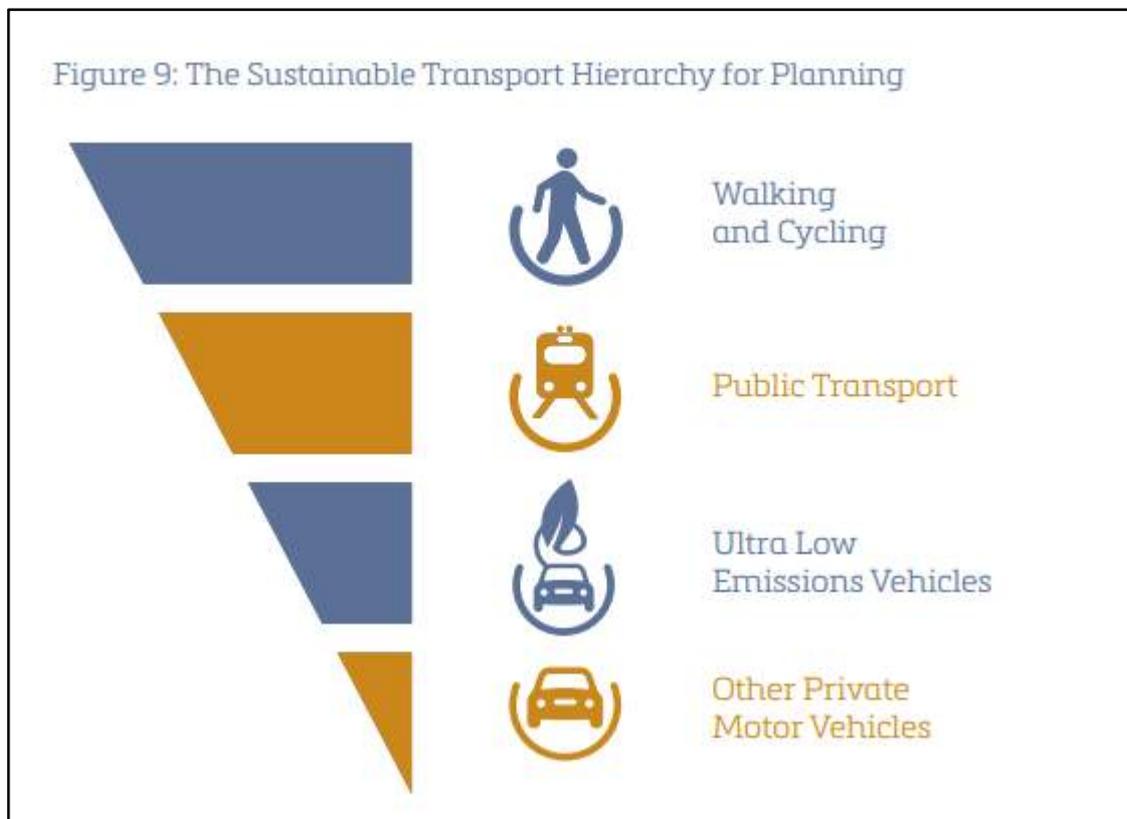


Figure 6.1 – Sustainable Transport Hierarchy for Planning

6.2.5 The proposed development is situated in an accessible location. There is good walking and cycling infrastructure adjacent to the site, with public transport services within acceptable walking distance.

6.2.6 The proposed development therefore accords with the general principles of the PPW.

6.3 Wales Transport Strategy

6.3.1 This strategy sets out the vision for how the transport system can help to deliver the priorities for Wales, helping to put Wales on a pathway to creating a more prosperous, green and equal society. The three visions for the document are as follows:

- *“Bring services to people in order to reduce the need to travel;*
- *Allow people and goods to move easily from door to door by accessible, sustainable and efficient transport services and infrastructure; and*
- *Encourage people to make the change to more sustainable transport.”*

6.3.2 As outlined above, this TA demonstrates that the site is accessible by active and sustainable modes of travel, and that safe and suitable access can be gained to the development. The development proposals therefore apply the principles set out in the Wales Transport Strategy.

6.4 Planning Policy Wales, Technical Advice Note 18: Transport

6.4.1 Welsh Government Planning Policy Wales; TAN 18: Transport (2007) sets out how to integrate land use and transport planning and provides a framework for the assessment and mitigation of transport impacts. The note includes advice for transport related issues when planning for new developments, encompassing advice on location of development, parking and design of development, and walking, cycling and sustainable transport infrastructure. The Advice Note requires all applications for industrial use over 5,000 sqm gross floor area to be accompanied by a Transport Assessment. The aims of undertaking the Transport Assessment and establishing a Transport Implementation Strategy are to:

- *Understand the transport impacts of the development;*
- *Clearly communicate the impacts to assist the decision-making process;*
- *Demonstrate that the development is situated in a location that will produce a desired and predicted output;*
- *Mitigate negative transport impacts through the design process and (where applicable) secured through planning conditions or obligations;*
- *Maximise the accessibility of the development including by non-car modes; and*
- *Contribute to relevant development plan and Regional Transport Plan objectives relating to accessibility of services and modal share.*

6.5 North Wales Joint Local Transport Plan 2015

6.5.1 In 2015 North Wales produced a Local Transport Plan jointly prepared by the North Wales Local Authorities in response to the Welsh Government requirement for LTPs to be submitted by the end of January 2015. The Plan is a statutory document for transport in the region and sets a detailed framework for 2015-2020.

6.5.2 The Vision of the Joint Local Transport Plan is to “*remove barriers by delivering safe, sustainable, affordable and effective transport networks*”. The LTP complements the work of the North Wales Ministerial Task Force and the Economic Ambition Board, together with the statutory plans and policies of each of the authorities.

6.5.3 The Plan aims to address the key issues for North Wales:

- *The ability of the strategic road and rail corridors to provide the necessary good connectivity, for people and freight, within North Wales, to the ports and to the rest of the UK to support the economy and jobs, including tourism;*
- *The lack of resilience of the road and rail networks to planned and unplanned events including extreme weather;*

Transport Assessment

- *The need for good access to and between the three Enterprise Zones in North Wales;*
- *The lack of viable and affordable alternatives to the car to access key employment sites and other services; and*
- *The need for good road links to / from the trunk road network into the rural areas to help retain the viability of local businesses and support the Welsh language and culture.*

6.5.4 The site is situated within the Deeside region, which is considered by the North Wales Joint Transport Plan 2015 as an urban area.

6.5.5 The Plan aims to improve connections to key destinations and markets, enhance access to employment and services, increase levels of walking and cycling, bring improved safety and security and at the same time bring benefits and minimised impacts on the environment.

6.5.6 The Plan also follows the earlier Wales National Transport Plan, 2010 which set out interventions to strengthen the development of a sustainable transport system and that contribute to the Welsh Government's long-term aim for a decarbonised transport system in Wales. As aforementioned, the proposed site is well placed to make good use of the sustainable methods of travel (walking, cycling, and public transport) and is thus in line with national and local policy of prioritising sustainable travel.

6.6 Deeside Plan

6.6.1 The Deeside Plan sets out a vision for the growth of Deeside for 2015-2020 and beyond. It identifies the key strengths and weaknesses of Deeside and 5 core areas of improvement: Economic, transport, housing, skills and employment, as well as environment.

6.6.2 On the issue of transport, the Deeside Plan states specifically that it aims to:

- *“Maximise the benefits of regional transport infrastructure investment;*
- *Use transport infrastructure investments to unlock further economic growth opportunities;*
- *Support modal shift from the private car to more sustainable patterns of movement;*
- *Develop solutions to reduce current congestion and ensure that transport, economic growth and housing are considered in parallel to reduce negative impacts from future growth;*
- *Encourage active travel through green infrastructure corridors and investment in cycling and pedestrian infrastructure.” (emphasis added).*

6.6.3 Based on the above, it is considered that the Proposed Site will be in line with the objectives and aims of Deeside's Plan, due to its accessibility via existing public network and active travel method, as well as the great potential of the site to encourage the growth of these services.

7.0 Summary and Conclusion

7.1 Summary

- 7.1.1 Curtins has been appointed on behalf of Industrie Cartarie UK Ltd and CHEL to provide traffic and transportation advice in relation to the proposals to deliver the companies first tissue paper processing and production facility in the UK.
- 7.1.2 ICT UK Ltd has identified the Northern Gateway site at Queensferry in Flintshire as a suitable site and location for their first tissue paper processing and production facility in the UK. The Proposal subject of a full planning application represents a significant opportunity to kick-start the delivery of the employment uses on Northern Gateway site, which is allocated for mixed use development, with a significant phase of employment development which will bring significant investment and employment opportunities to the region.
- 7.1.3 A review of accidents on the local highway network does not indicate any correlations that would suggest that highway condition, layout or design were significant contributory factors in the accidents.
- 7.1.4 Walking, cycling and public transport use are considered to be realistic modes to the private car. It is also envisaged that the improvements to the pedestrian and cycling facilities along the Corus access road will be implemented before the completion of the proposed development.
- 7.1.5 The trip generation assessment demonstrates that the proposed development could generate 106 two-way movements in the AM and PM peak.
- 7.1.6 The cumulative assessment indicates a requirement for the implementation of Mitigation 2 measures. However, the approval of App Ref: 060899 ensures that all off-site highway improvements required to facilitate the full delivery of the Northern Gateway proposals will be implemented prior to the development of the application site and therefore no further mitigation is required.
- 7.1.7 A review of relevant local and national transport planning guidance has been undertaken. It is considered that the Proposed Development conforms with such policies.

7.2 Conclusion

- 7.2.1 From a traffic and transportation perspective there are no reasons why the planning application should not be granted.

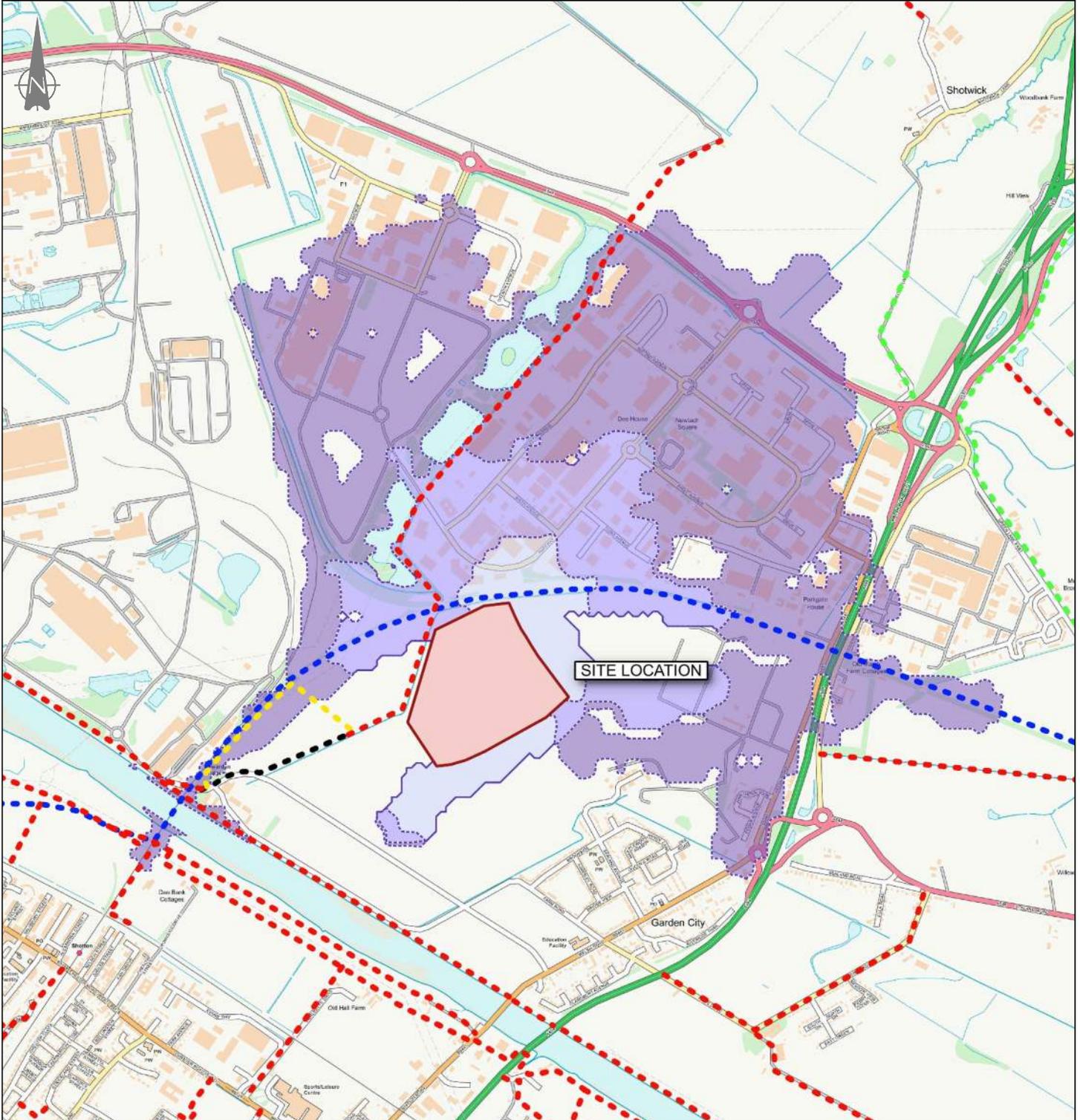
Plans



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Project: ICT DEESIDE - PLOT C		Status: PRELIMINARY	
Drg Title: ACCESSIBILITY INDICATIVE WALKING CATCHMENT		Drawn By: JM	Checked By: AT
		Designed By: JM	Date: 17/09/19
		Scale: NTS	
Project No:	Originator:	Volume:	Level:
79407 - CUR - 00 - XX - DR - TP - 06003 - P01		Type:	Role: Category / Number: Rev:



KEY:	Site	Existing Bridleway
	Walking Catchment: 500m	Existing PRoW
	1000m	National Cycle Route 5
	2000m	PRoW Diversion
		PRoW To Be Stopped Up

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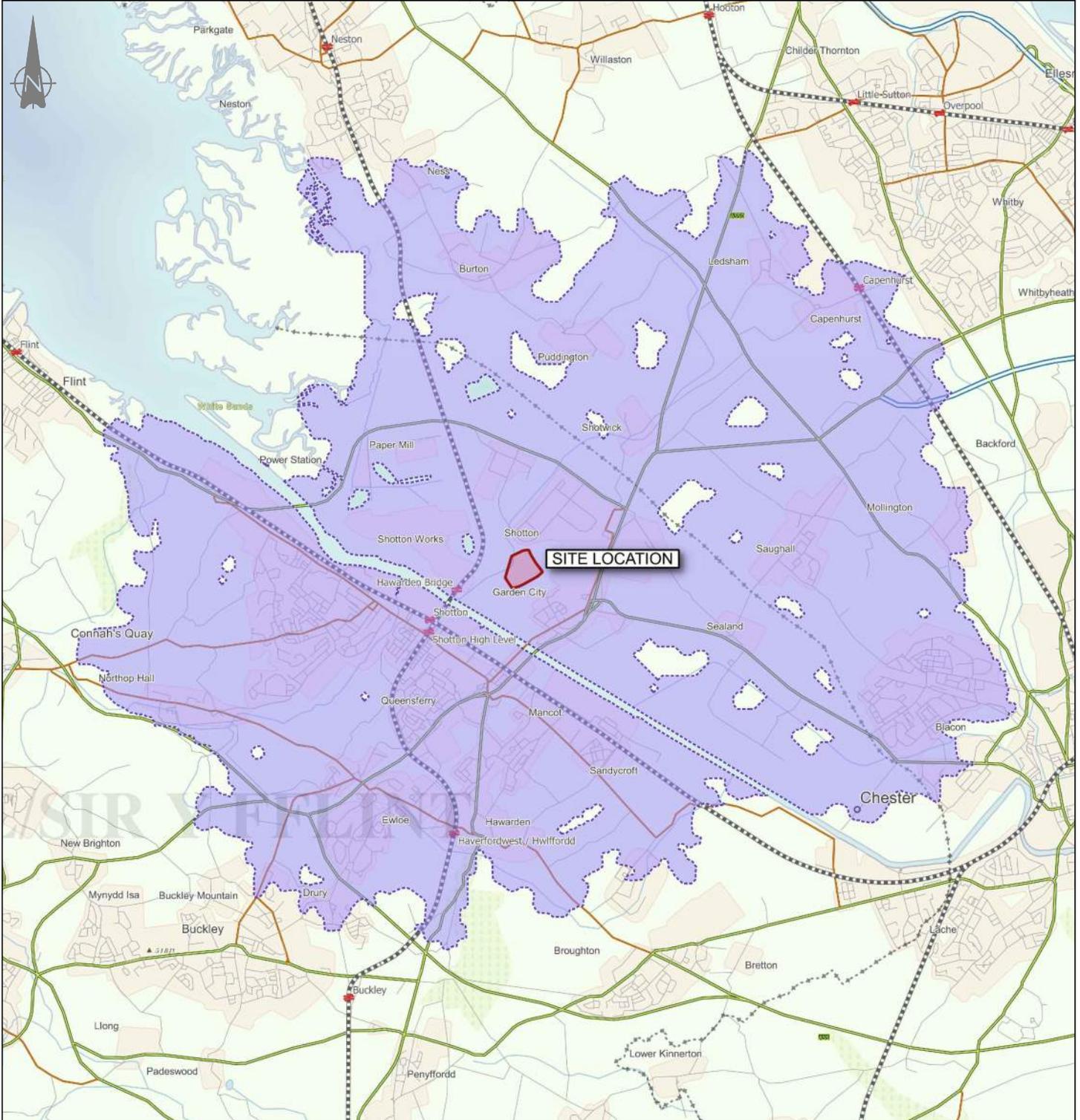
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Project: ICT DEESIDE - PLOT C		Status: PRELIMINARY	
Drg Title: ACCESSIBILITY INDICATIVE CYCLE CATCHMENT		Drawn By: JM	Checked By: AT
		Designed By: JM	Date: 17/09/19
		Scale: NTS	
Project No:	Originator:	Volume:	Level:
Type:		Role:	Category / Number:
79407 - CUR - 00 - XX - DR - TP -		06004 -	P01



KEY: Site Cycle Catchment:
 8000m



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Project: ICT DEESIDE - PLOT C

Status: PRELIMINARY

Drg Title: ACCESSIBILITY
 INDICATIVE PUBLIC TRANSPORT
 CATCHMENT

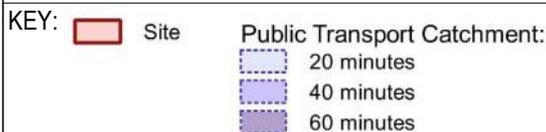
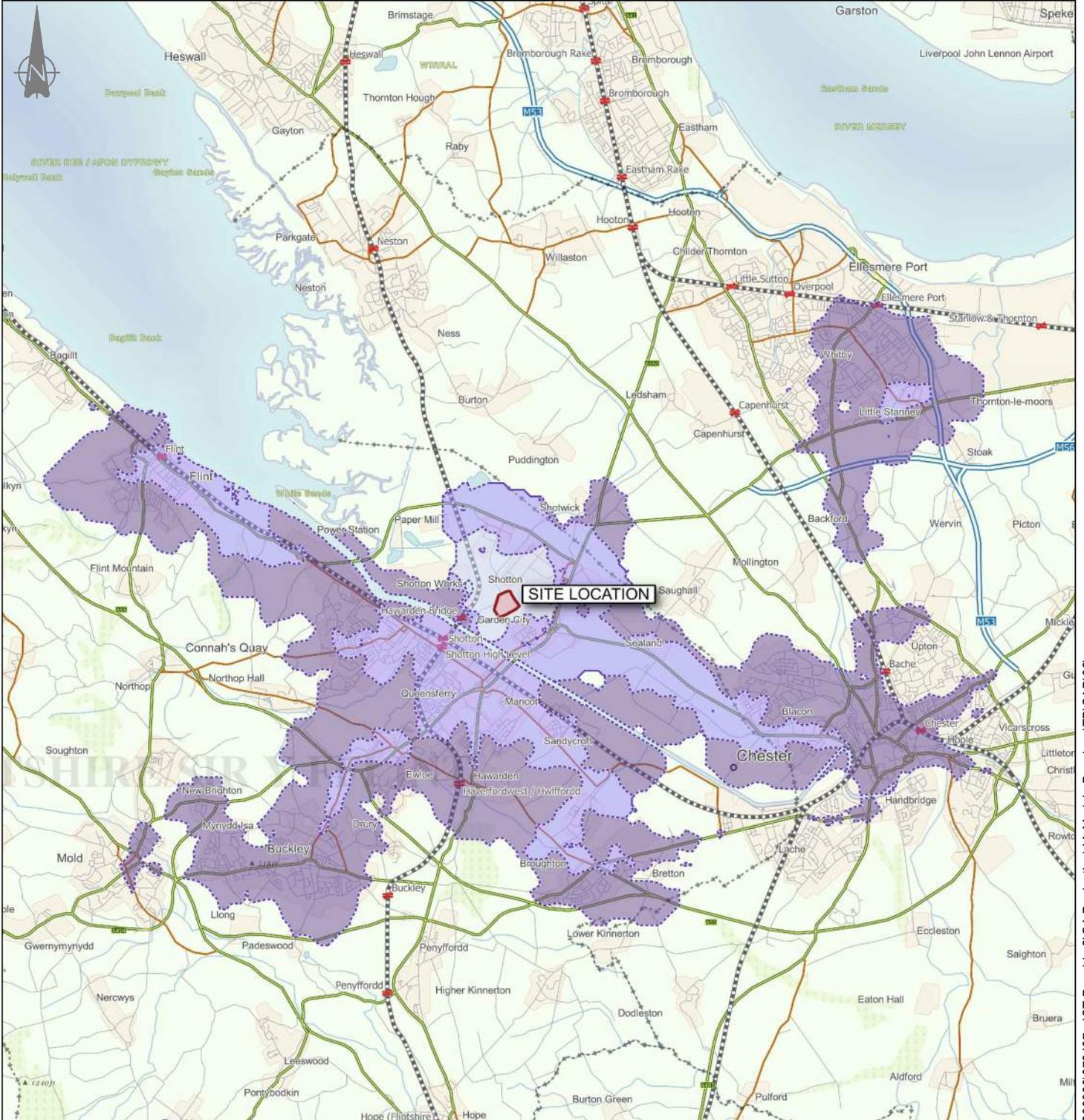
Drawn By: JM Checked By: AT

Designed By: JM Date: 17/09/19

Scale: NTS

Project No: Originator: Volume: Level: Type: Role: Category / Number: Rev:

79407 - CUR - 00 - XX - DR - TP - 06005 - P01



Appendix A – Proposed Site Layout

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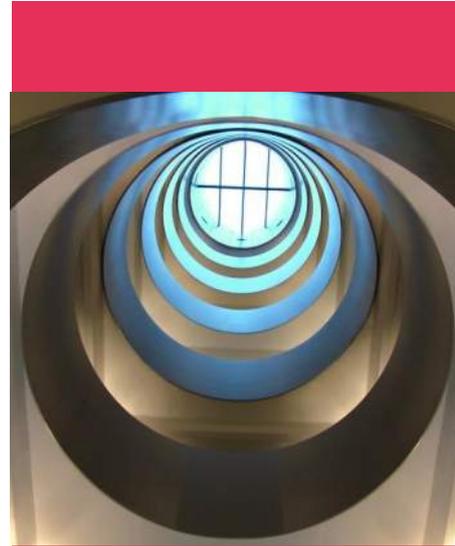
Appendix 2.2 – Travel Plan

Paper Mill Facility, Plot C, Airfields Northern Gateway, Deeside

Interim Travel Plan

Curtins Ref: 079407-CUR-00-XX-RP-TP-001-V04
Revision: V04
Issue Date: 20 September 2021

Client Name: Industrie Cartarie Tronchetti (ICT) UK Ltd and Crag Hill Estates Ltd (CHEL)



Control Sheet

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Reviewed	Signature	Date
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Table of Contents

1.0	Introduction.....	1
1.1	Background.....	1
1.2	What is a Travel Plan?.....	1
1.3	Purpose and Scope of this document.....	2
1.4	Document Structure.....	2
2.0	Travel Plan Benefits.....	3
2.1	Introduction.....	3
2.2	Health Benefits.....	3
2.3	Environmental Benefits.....	3
2.4	Financial Benefits.....	4
2.5	Mutual Benefits.....	4
2.6	Travel Plan Objectives.....	5
3.0	Site Location and Development Proposals.....	6
3.1	Site Location.....	6
3.2	Local Highway Network.....	10
3.3	Proposed Development.....	10
3.4	Pedestrian/ Cycle Access.....	12
3.5	Public Transport.....	13
4.0	Accessibility by Sustainable Modes of Travel.....	14
4.1	Introduction.....	14
4.2	Pedestrian Accessibility.....	14
4.3	Accessibility by Cycle.....	16
4.4	Public Transport Accessibility.....	18
4.5	Summary.....	22
5.0	Travel Plan Initiatives.....	23
5.1	Introduction.....	23
5.2	Production of Welcome Packs.....	23

Interim Travel Plan

5.3	Measures to Encourage Walking	23
5.4	Measures to Encourage Cycling	24
5.5	Measures to Encourage Public Transport.....	24
5.6	Car Sharing	24
5.7	Reducing the Need to Travel	25
6.0	Travel Plan Targets	26
6.1	Introduction.....	26
6.2	Travel Plan Targets	26
6.3	Output Targets	26
6.4	Existing Mode Share	27
6.5	Indicative Mode Split Targets.....	29
7.0	Monitoring and Review.....	30
7.1	Introduction.....	30
7.2	Responsibility and Management	30
7.3	Travel Plan Coordinator (TPC).....	30
7.4	Monitoring and Update of the Travel Plan	30
7.5	Data Collection and Analysis	31
8.0	Action Plan	32
8.1	Introduction.....	32

Tables

Table 4.1 – CIHT Recommended Walking Distances	14
Table 4.2 – Bus Service Summary	20
Table 6.1 – Output Targets.....	27
Table 6.2 – 2011 Census.....	28
Table 6.3 – Existing Mode Share	28
Table 6.4 – Indicative Future Mode Split Targets.....	29
Table 8.1 – Action Plan.....	32

Plans

079407-CUR-00-XX-DR-TP-06003-P01_Walking Catchment

079407-CUR-00-XX-DR-TP-06004-P01_Cycle Catchment

079407-CUR-00-XX-DR-TP-06005-P01_Public Transport Catchment

Appendices

Appendix A – Proposed Site Layout

1.0 Introduction

1.1 Background

- 1.1.1 Curtins has been appointed on behalf of Industrie Cartarie Tronchetti (ICT) UK Ltd and Crag Hill Estates Ltd (CHEL) to provide traffic and transportation advice in relation to the proposals to deliver the companies first tissue paper processing and production facility in the UK.
- 1.1.2 ICT UK Ltd has identified the Plot C Site at the Airfields Northern Gateway site at Queensferry in Flintshire as a suitable site and location for their tissue paper processing and production facility in the UK.
- 1.1.3 The proposed planning application is described as;
- “Full Planning Application for erection of Paper Processing Mill to produce and manufacture tissue paper (B2, B8 use class) with ancillary B1a office space; associated servicing and infrastructure including car parking, HGV parking and vehicle and pedestrian circulation; noise mitigation features; earthworks to create development platforms; creation of drainage features including a new outfall to the River Dee; water treatment plant; and landscaping.”*
- 1.1.4 The intention is to develop the Paper Mill facility over three phases. The Comprehensive Development (all three phases) comprises 124,344sqm of employment floorspace including manufacturing and production area (B2 use class), ancillary offices (B1a use class), and a warehouse section, (B8 use class) with car parking and HGV parking.
- 1.1.5 The proposed ICT facility will be located on Plot C of the Airfields site.

1.2 What is a Travel Plan?

- 1.2.1 A Travel Plan is a general term for a package of initiatives and measures tailored to the needs of an individual development and aimed at promoting sustainable travel choices and reducing reliance on the car. It involves the development of a set of measures and targets that can enable a developer or an organisation to reduce the impact of travel and transport on the environment, whilst also bringing a number of other benefits to individuals, whether they be staff, residents or visitors.
- 1.2.2 A Travel Plan is a dynamic process that will grow and develop with time and in accordance with the changing circumstances of a site and the environment in which it is to be delivered. It is not a one-off event to be undertaken and completed, nor is it a document to be produced and put on a shelf.
- 1.2.3 Whilst this Travel Plan report is being developed to support a planning application, it will need to be flexible and dynamic enough to take account of the evolving requirements and circumstances of the individual development to which it applies and will be reviewed and updated on a regular basis.

Interim Travel Plan

1.2.4 In essence, a TP is intended to encourage people to choose alternative transport modes over single occupancy car use and, where possible, reduce the need to travel at all. Such a plan should include a range of measures designed to achieve this goal.

1.3 Purpose and Scope of this document

1.3.1 This Interim Travel Plan (ITP) has been prepared to promote sustainable travel options to/from the Proposed Development. It is intended read alongside the accompanying Transport Assessment (TA), Ref: **079407-CUR-00-XX-RP-TA-001-V01**, prepared to consider the traffic and transport impact of the development.

1.3.2 A TP includes a list of measures that will be implemented to affect modal choice and influence the use of more sustainable transport modes and a management strategy for the agreed lifetime of the TP.

1.4 Document Structure

1.4.1 Following this introductory section, **Section 2** of the report provides background information on the benefits which can be derived from a successful Travel Plan. It also sets out key aims and objectives for the Travel Plan process.

1.4.2 **Section 3** describes the existing location of the site and proposed development layout.

1.4.3 **Section 4** assesses the accessibility of the site by various means of sustainable modes of travel including public transport, walking and cycling.

1.4.4 **Section 5** outlines various initiatives that will be considered to encourage a modal shift from single occupancy car travel and towards sustainable modes of travel for future employees.

1.4.5 **Section 6** provides example Travel Plan Targets, outlining the need to present SMART targets following the completion of the base Travel Surveys.

1.4.6 **Section 7** provides details on the monitoring and review process, responsibility and management of the document, and the appointment of a Travel Plan Coordinator (TPC) as the Travel Plan process progresses.

1.4.7 **Section 8** concludes the report by providing an Action Plan which summarises the document and the next steps.

2.0 Travel Plan Benefits

2.1 Introduction

2.1.1 The benefits from a TP can be loosely categorised under three main headings:

- Health Benefits;
- Environmental Benefits; and
- Financial Benefits.

2.1.2 This section explores just some of the improvements which can be made to an organisation during a successful Travel Planning process.

2.2 Health Benefits

2.2.1 A reduction in polluting vehicles on the roads surrounding the Site will mean better air quality throughout the area. There are also well documented health benefits associated with active travel, yet activity levels are generally low across the UK.

2.2.2 Regular moderate physical activity (including walking and cycling) can help prevent and reduce the risk of cardiovascular disease, cancer, obesity, diabetes, stroke, mental health problems, high blood pressure, and musculoskeletal problems.

2.3 Environmental Benefits

2.3.1 Climate change is a global issue that affects all nations. Data on greenhouse gas emissions provided by the Department for Transport show that carbon emissions from domestic transport account for one third of the UK's net domestic emissions. Over 90% of domestic transport emissions arise from road transport. How people travel will therefore play a key role in the UK's carbon reduction agenda as follows.

2.3.2 The Welsh Government has set out a legal commitment to achieve net zero emissions by 2050.

"In April 2019, Welsh Government were the first UK government to declare a 'Climate Emergency' and by June 2019 the UK Committee on Climate Change (UKCCC) published a new recommendation for a 95% reduction in Greenhouse gas (GHG) emissions by 2050. Welsh Government responded by accepting this new challenge and went one step further by pledging to achieve net-zero emissions by 2050."

Source: *Transport for Wales – Low Carbon Impact 2019/20*

Interim Travel Plan

2.3.3 To help achieve this ambitious goal, the Welsh Government has implemented their Low Carbon Impact Strategy to minimise the emissions arising from all their services. From a transport perspective the Government is committed to the following:

- Reducing rail emissions through both vehicle and fuel efficiency measures.
- Upgrading existing rolling stock over the next 3 years.
- All electricity is procured from renewable sources with 50% of this to be generated in Wales by 2025.
- By electrifying the Core Valleys Lines to ensure that services along these routes consume no diesel fuel, achieving 100% zero-carbon passenger miles.
- Providing infrastructure to support the uptake of electric vehicles.
- Installation of cycle storage to encourage passengers to cycle to stations.

2.4 Financial Benefits

2.4.1 Although secondary to health and environmental benefits, there are also financial benefits to be gained from increasing active travel rates:

“The estimated direct cost of physical inactivity to the NHS across the UK is £1.06 billion. This is based upon five conditions specifically linked to inactivity, namely coronary heart disease, stroke, diabetes, colorectal cancer and breast cancer.”

Source: *Start active, stay active: report on physical inactivity in the UK*, DoH, 2011.

2.4.2 Individuals can also benefit financially from travelling to and from a site with a TP in place due to the improved range of transport options available, some of which may be more cost-effective than car travel. In some circumstances, TP measures can remove an individual's need for a car (or their household's need for a second car), removing the capital and on-going cost of car ownership.

2.4.3 An effective TP can help encourage employees to lessen their environmental impact by reducing emissions from transport, lead a healthier and more active lifestyle, and reduce financial wastage.

2.5 Mutual Benefits

2.5.1 As demonstrated, there are multiple reasons as to why TPs are important to modern society. The initiatives in this TP will have a positive effect on the future employees of the proposed development. They must be communicated correctly:

“It is important that the outcomes sought from the travel plan can be seen as a benefit to all parties, e.g. the developer, occupiers and site users, the community and the local authority. Such benefits can help in gaining widespread commitment.”

Source: *Good Practice Guidelines: Delivering Travel Plans through the Planning Process*, DfH, 2009.

2.6 Travel Plan Objectives

2.6.1 Considering the above benefits, this TP aims to achieve the following objectives:

- **Objective 1** – To increase the level of cycling to and from the site;
- **Objective 2** – To increase the level of walking to and from the site;
- **Objective 3** – To increase the level of public transport use to and from the site;
- **Objective 4** – To increase the number of people car sharing to and from the site; and in turn
- **Objective 5** – To reduce single occupancy car travel to and from the site.

3.0 Site Location and Development Proposals

3.1 Site Location

- 3.1.1 The Site is located in North of Wales, within the local authority area of Flintshire. The site is located on the western edge of Garden City, a village within the Sealand area of Flintshire. The nearest town centre is Queensferry, which is approximately 1 mile to the south of the site. The town of Mold is 8 miles to the south west and the city of Chester is 6 miles to the east.
- 3.1.2 The Site occupies a strategic location, not only within Flintshire, but also in a sub-regional and national spatial context. Located next to Deeside Industrial Park, a major centre for employment, the site lies strategically within the wider Deeside area, and is well served by the local trunk road network with access from Welsh Road (B5441). To the east of the B5441 Welsh Road lies the A494 Trunk Road. The A494 is a dual carriageway that connects the M56 Motorway to the A55 and is a strategic transport route which connects North Wales to North West England, providing links to Liverpool, Cheshire and Greater Manchester.
- 3.1.3 The Site is part of, and integral to, the larger Deeside Enterprise Zone (EZ) designated by the Welsh Government in September 2011. Figure 3.1 shows the location of the site in a national context with Figure 3.2 showing the site in regional context.



Figure 3.1 – National Context Plan

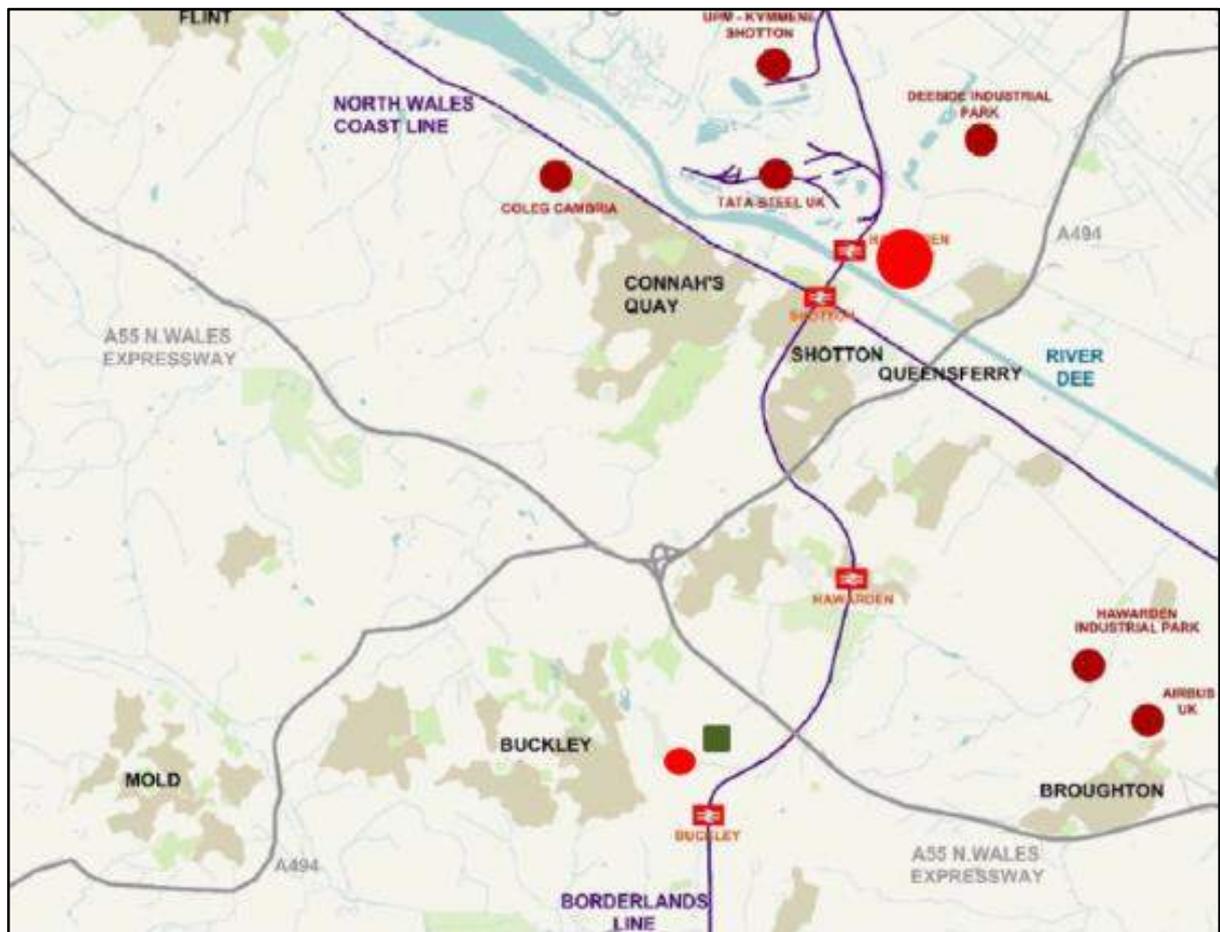


Figure 3.2 – Regional Context Plan

- 3.1.4 The Application Site Boundary relates to an area of land of approximately 23.86 hectares (58.96 acres) in extent and forms part of the former RAF Sealand 'South Camp' site, now referred to as the Airfields, which forms part of the Northern Gateway Strategic Mixed Use Development site allocated under Policy HSG2A in the Flintshire UDP (2011). Outline planning permission (ref: 049320) was granted for an employment led mixed use development in January 2013 and subsequently varied with the last Section 73 application approved in April 2021 (ref: 061125).
- 3.1.5 The Site spans across Plot C as identified in The Airfields Design Statement (July 2013) submitted to discharge condition 6 of the outline planning permission (ref: 049320). Figure 3.3 extracted from The Airfields Design Statement.

Interim Travel Plan

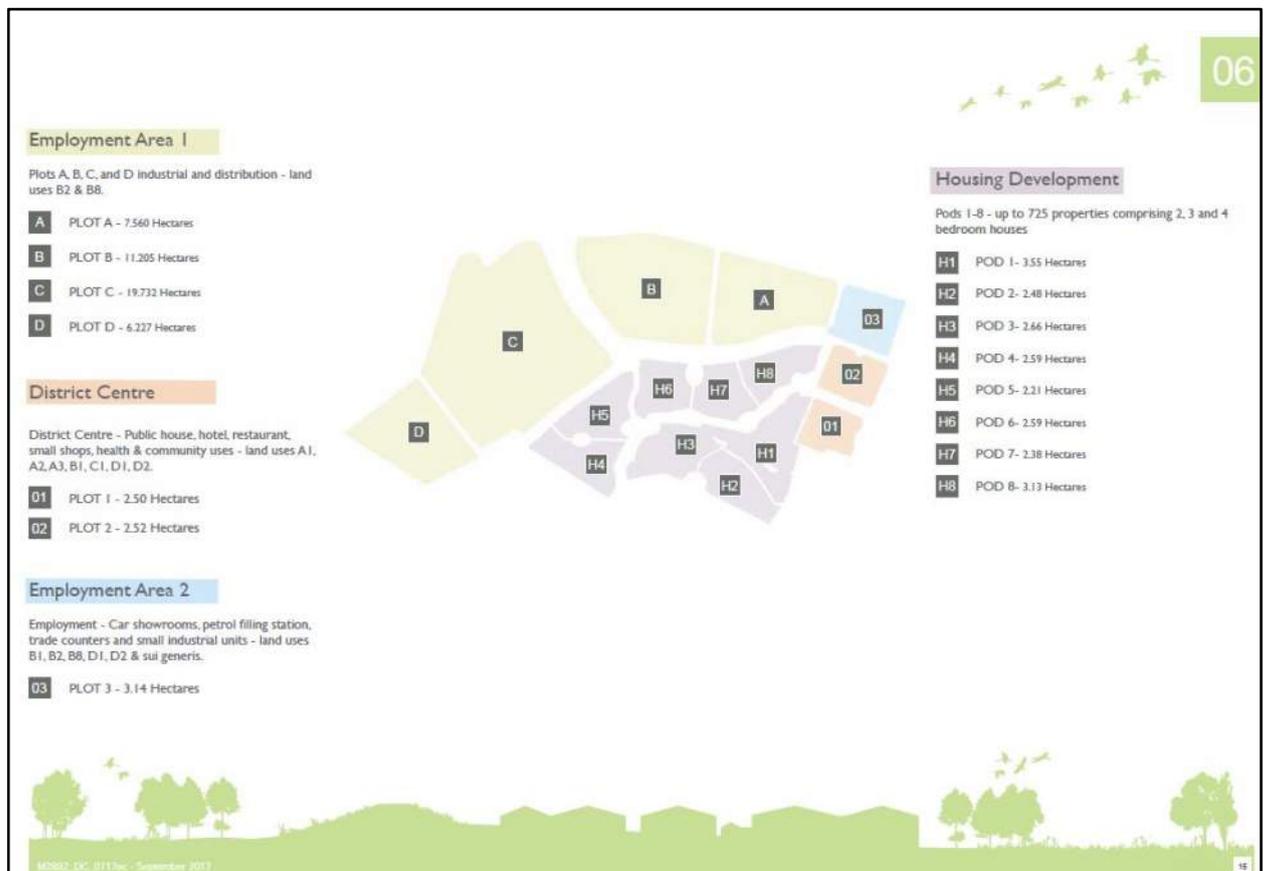


Figure 3.3 – Plan Extracted from Airfields Design Design Statement (July 2013)

- 3.1.6 The Application Site occupies the north western part of the Airfields site.
- 3.1.7 The Site currently comprises managed grassland. It does not have any of the former RAF Camp building bases and site roads that were removed in the phase 1 enabling works associated with the Airfields site. There is a group of trees along the north western boundary on the bank of the Shotwick Brook and a hedge along the western boundary.
- 3.1.8 The north and western perimeter of the Application Site abuts the existing disused rail corridor which now incorporates an important cycling and walking route. This route has been developed by Sustrans and is known as the Chester Millennium Greenway, Chester to Connah’s Quay Railway Path. Linking Fairfield Road in Chester approximately 4.5 miles to the east with Hawarden Bridge, this route uses the alignment of the former Mickle Trafford Freight line and forms part of the National Cycle Network Route 5. Beyond the National Cycle Route is the Deeside Industrial Park (DIP).
- 3.1.9 To the north western boundary of the Site is the Shotwick Brook. Public Right of Way Footpath No. 3 runs parallel with a section of the western banks of Shotwick Brook on land owned by PGNGL.
- 3.1.10 There is also hedgerow beyond the western boundary of the Application Site which separates the CHEL owned land from the adjoining land owned by PGNGL which forms part of the former Corus Garden

Interim Travel Plan

City site which also forms part of the Northern Gateway Strategic Mixed Use Development site allocated under Policy HSG2A in the Flintshire UDP (2011).

- 3.1.11 Beyond the eastern and southern boundaries of the Application Site will be the Welsh Government's proposed Commercial Spine Road Phases 2 and 3. The proposed Commercial Spine Road is now the subject of a reserved matters application submitted to Flintshire County Council (FCC) in June 2021 (063191 and 063187) and once determined will provide highways access into Plot C.
- 3.1.12 This new road which will connect into the completed Road 1 constructed by Welsh Government which takes access from Welsh Road will provide a public transport link into the Deeside Industry Park and link the Airfield site with the adjacent former Corus Garden City site delivering a comprehensive mixed use development which will meet with the policy objectives of the Northern Gateway Strategic Mixed Use Development site allocated under Policy HSG2A in the Flintshire UDP (2011).
- 3.1.13 Beyond Road 2 of the Commercial Spine Road is vacant land identified for employment development illustrated in the approved CHEL Design Statement and granted outline planning permission. To the South of Road 3 of the Commercial Spine Road will be residential development comprising H3, H4, H5, H6, H7 and H8a. Plots H3, H5, H6, H7 and H8a is currently the subject of a reserved matters application (Ref: 062898) for 368 dwellings submitted jointly by Anwyll Homes and Bellway Homes.
- 3.1.14 The Application Site extends to the south onto the former Corus Garden City site owned by PGNGL and follows the alignment of the Road 3 of the Commercial Spine Road with the application boundary extending to the banks of the River Dee as the road makes provision for a below ground easement to allow the discharge of waste water from the proposed ICT Paper Mill Facility.
- 3.1.15 This wider land parcel referred to as the former Corus Garden City part of the Northern Gateway site proposed for a mix of employment and residential uses, currently comprises agricultural land and the Grade II Listed John Summers buildings which were previously occupied by Tata Steel. This site is contained by the River Dee to the south, Garden City and Welsh Road to the east, the Wrexham-Bidston Railway line, Harwarden Station and the Tata Steel works to the west. Garden City to the east was originally developed to house the workers of the Shotton Steelworks and comprises a mix of semi-detached and terraced housing. Garden City has some local facilities which include a pharmacy, church, post office, public houses and primary school.
- 3.1.16 The Site is currently designated for mixed use development within the adopted Flintshire UDP (2011) and Proposals Map and forms part of a wider area identified as the Northern Gateway Strategic Mixed-Use Allocation under Policy HSG2A. The Site is therefore identified for B1, B2 and B8 employment development.

3.2 Local Highway Network

Corus Access Road

- 3.2.1 This is a single carriage two-way road and runs an east west alignment. The road is approximately 2.5km long and extends between B5411 Welsh Road to the east and River Road to the west.
- 3.2.2 Sections of the road has three lanes with two lanes running in the west-east direction towards the B5441 Welsh Road and one lane running in the east west direction. There are no formal footways on both sides of the carriageway, however there is a grass verge located to the south of the carriageway which could be utilised by pedestrians.
- 3.2.3 The road forms a priority junction with Welsh Road. It is intended as part of the enabling works for the PGNGL Site to improve this by shared footway/cycle along this road to connect to the existing facilities on Welsh Road. These enabling works have now secured approval under a reserved matters application.
- 3.2.4 As part of the enabling highway works, it is intended to improve this road including the provision of a shared footway/cycleway along the length of the road.

B5441

- 3.2.5 The B5441 is a single carriageway road that runs parallel to the A494 along the south-east edge of the site. The route forms part of the Welsh Road Bridge and passes through a residential area in the immediate vicinity of the site, subject to a speed limit of 20 mph.
- 3.2.6 There is good pedestrian infrastructure along the road with wide footways located on both sides of the carriageway. There is also advisory cycle lanes on both sides of the carriageway. The footways and cycle lanes are clearly signed. There is streetlighting along the road as well as bus stops with shelters.
- 3.2.7 The National Cycle Route (NCR 563) runs along the B5441, ensuring good facilities for cyclists and facilitating sustainable modes of travel.

A494

- 3.2.8 The A494 is a trunk road that runs to the south-east of the site. The route, which is officially known as the Dolgellau to South of Birkenhead Trunk Road, runs between the terminus of the M56 motorway between Mollington and Capenhurst and the A470 at Dolgellau, Gwynedd.

3.3 Proposed Development

- 3.3.1 Whilst the Site is identified for B1, B2 B8 employment development as part of its allocation under Policy HSG2A in the Flintshire UDP (2011) for mixed use development and has outline planning permission (ref: 049320) for an employment led mixed use development granted in January 2013 and subsequently varied (ref: 061125) in April 2021, ICT UK Ltd's bespoke operational requirements are such that they

Interim Travel Plan

require a building on Site that would exceed building height parameters approved within the extant planning permission which are currently set at 30m for this plot and requires land outside the redline application boundary granted outline planning permission.

3.3.2 The planning application therefore seeks full planning permission for this development which is described below:

Full Planning Application for erection of Paper Processing Mill to produce and manufacture tissue paper (B2, B8 use class) with ancillary B1a office space; associated servicing and infrastructure including car parking, HGV parking and vehicle and pedestrian circulation; noise mitigation features; earthworks to create development platforms; creation of drainage features including a new outfall to the River Dee; water treatment plant; and landscaping.

3.3.3 It is intended to deliver the development in three phases as summarised below:

- Phase 1(B2, B8 ancillary B1a Uses) 66,809sqm
- Phase 2 (B2, B8 uses) 17,002sqm
- Phase 3 (B2, B8 uses) 40,533sqm

3.3.4 Overall, it is intended to provide 124,344sqm with associated car and HGV parking areas. Figure 3.1 shows the proposed site layout for the completed development (Phases 1, 2 and 3). The proposed site layout is provided in Appendix A at the rear of the report.

Interim Travel Plan

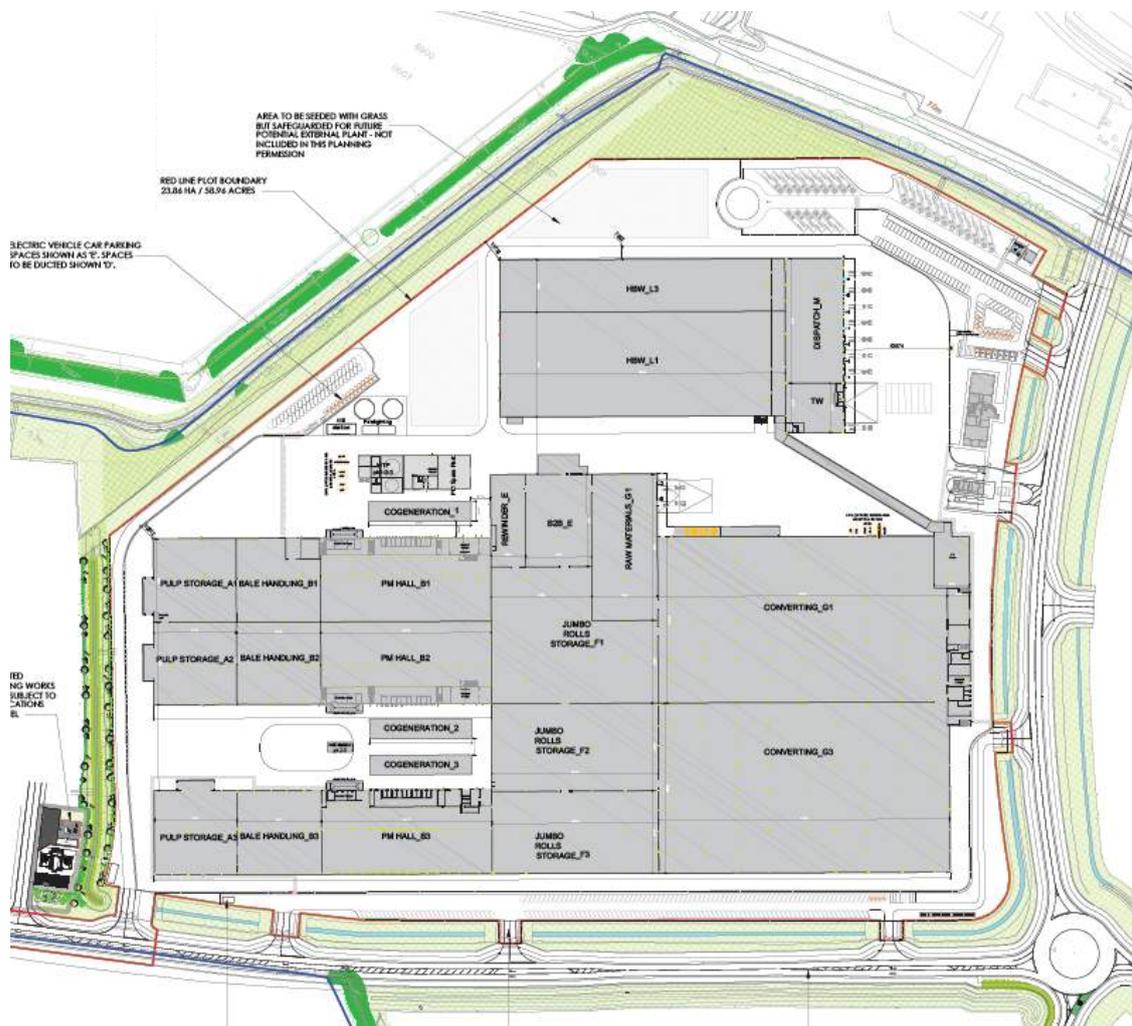


Figure 3.4 – Proposed Site Layout

3.4 Pedestrian/ Cycle Access

3.4.1 In terms of pedestrian and cycle access, the internal layout of the site has been designed to be permeable to both pedestrian cyclists. It is intended to connect the proposed footways within the site to the shared footway/cycle that will be constructed along the spine road as part of the wider enabling works package.

3.5 Public Transport

- 3.5.1 The proposed Commercial Spine Road and connecting completed Road 1 and Corus road are all designed to allow bus penetration into the Site and provide linkages through the wider Northern Gateway Site and into Deeside Industrial Park. A Bus Hub / Interchange is also proposed on land within the former Corus Garden City part of the Northern Gateway site immediately adjacent to the junction on to Welsh Road. This will be constructed and delivered by Flintshire CC and will improve public transport connections through the Northern Gateway site.

4.0 Accessibility by Sustainable Modes of Travel

4.1 Introduction

4.1.1 A key element of national and local policy is to ensure that new developments are located in areas where alternative modes of travel are available. It is important to ensure that developments are not isolated but are located close to complementary land uses. This supports the aims of integrating planning and transport, providing more sustainable transport choices, and reducing overall travel and car use.

4.1.2 The accessibility of the proposed development is considered in this context for the following modes of travel:

- Pedestrian accessibility;
- Cycle accessibility; and,
- Public transport.

4.2 Pedestrian Accessibility

4.2.1 Research has indicated that acceptable walking distances depend on a number of factors, including the quality of the development, the type of amenity offered, the surrounding area, and other local facilities. The Chartered Institution of Highways and Transportation (CIHT) document entitled 'Providing for Journeys on Foot' suggests walking distances which are relevant to this planning application. These are reproduced in Table 4.1.

CIHT Classification	Town Centres (m)	Commuting/School/Sightseeing (m)	Elsewhere/Local Services (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200

Table 4.1 – CIHT Recommended Walking Distances

4.2.2 To assist in summarising the accessibility of the site by foot, an indicative pedestrian catchment plan has been produced. **Plan 079407- CUR-00-XX-DR-TP-06003-P01** shows distances of 500m, 1,000m and 2,000m which are termed 'Desirable', 'Acceptable' and the 'Preferred Maximum' by the CIHT for commuting trips, which are likely to be the most significant categories of trips generated by the proposed employment development. Figure 4.1 below illustrates the catchment area.

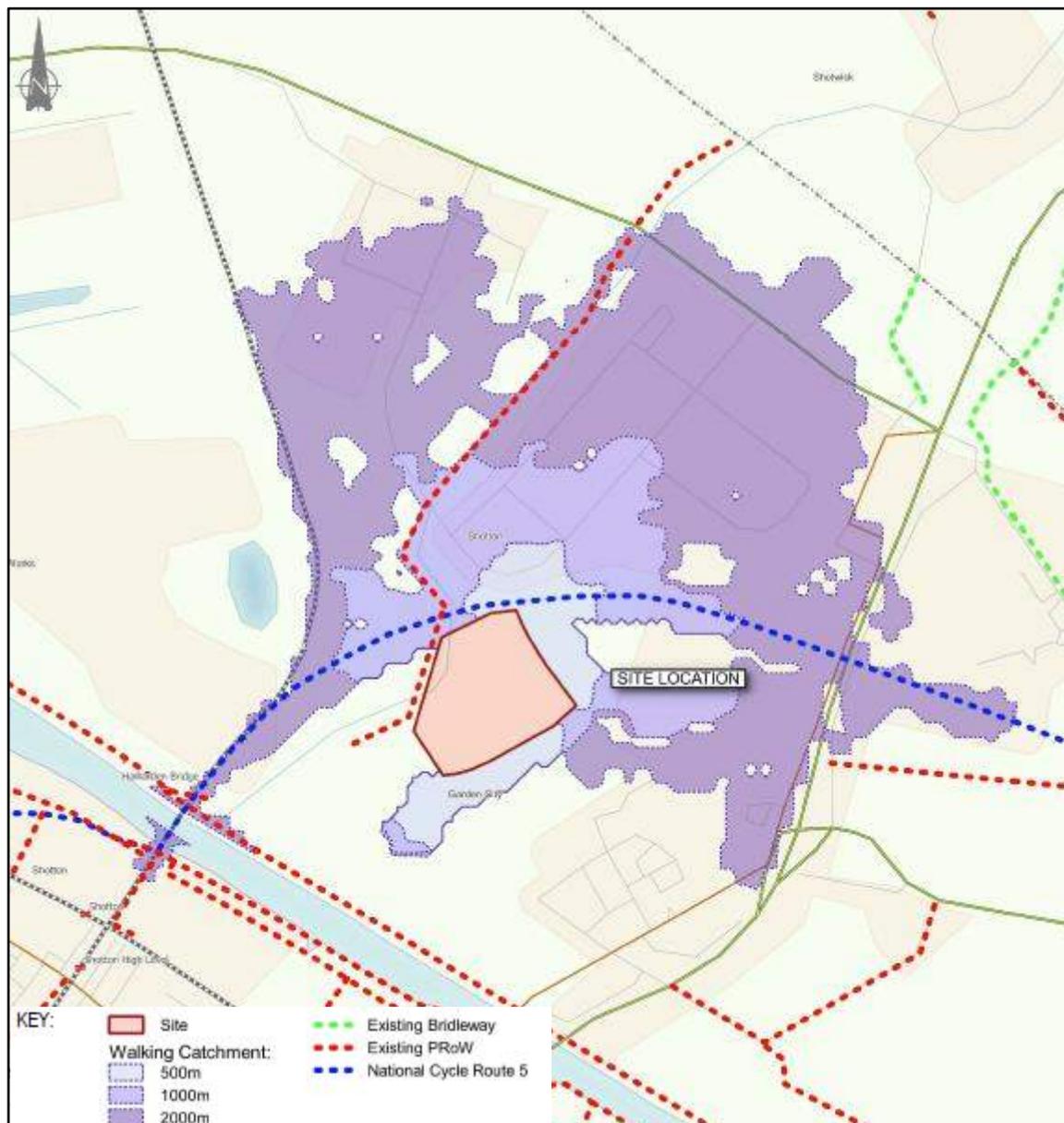


Figure 4.1 – Walking catchment

- 4.2.3 The surrounding industrial land uses around the development location and the pre-existing residential areas in Deeside ensures that the site is situated adjacent to potential site users and with good levels of pedestrian infrastructure as well as public amenities.
- 4.2.4 Most notably, the Welsh Road bridge is located within close proximity of the site and connects the site with the adjacent commercial and leisure area, as well as the large residential areas surrounding the site.
- 4.2.5 It is evident from Figure 4.1 that the site is located within an acceptable walk distance of the large existing residential area of Garden City and Shotton. This puts amenities such as the Garden city post

Interim Travel Plan

office, Sealand primary school, Natwest and HSBC bank services as well as Lidl in close proximity to the site. This reduces the need for car travel to access essential facilities. The Deeside Leisure centre which lies south of the site provides leisure opportunities for future employees of the proposed site.

4.2.6 Two bus stops along the B5441 in both are located within the 500m walk of the development. Additionally, Hawarden Bridge Railway Station is located within the 2km walk catchment to north-west of the site.

4.3 Accessibility by Cycle

4.3.1 In order to assist in assessing the accessibility of the site by cycle an 8km cycle catchment for the site has been considered. **Plan 079407-CUR-00-XX-DR-TP-06003-P01** presents an 8km cycle catchment for the site. This equates to a journey time of around 40 minutes, cycle at a speed of 12kph. Figure 4.23 below illustrates the catchment area.

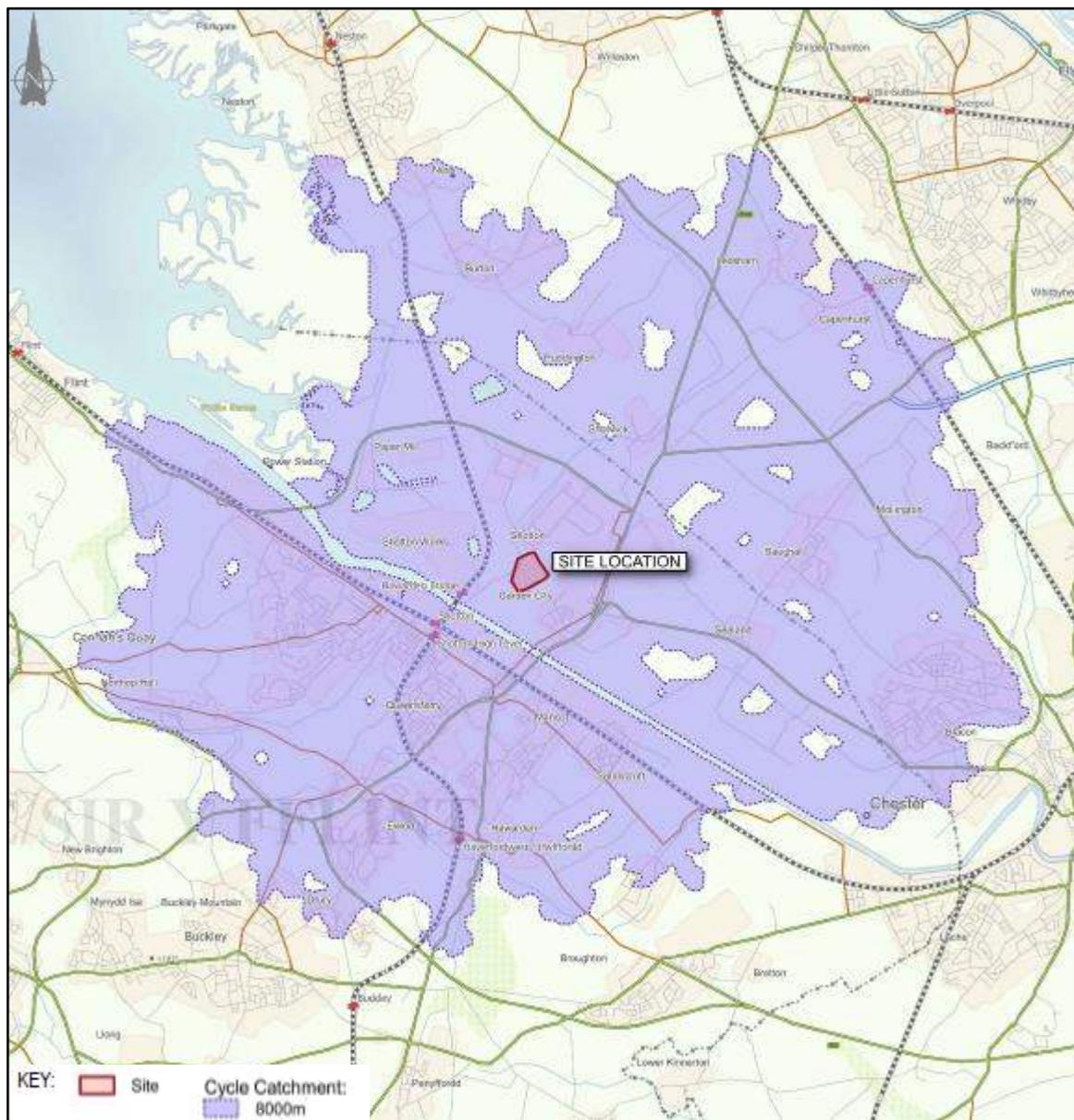


Figure 4.2 – Cycle catchment

- 4.3.2 The catchment extends as far as Nest Botanic Gardens in the north, Shotwick and Capenhurst to the east, Hawarden and Ewloe to the south and Northop to the west.
- 4.3.3 As mentioned in Section 2 the immediate road B5441 running parallel the site has existing cycle facilities with shared foot/cycleway which is set back from the carriageway thus providing a safe, traffic free and convenient route for cyclist (and pedestrians) accessing the site to and from the surrounding residential areas.

Interim Travel Plan

- 4.3.4 The wider local highway network in the vicinity of the site is predominately residential in nature, lightly trafficked with low vehicular speeds. Therefore, where specific cycle provisions are not provided the majority of the local roads are suitable for cycling.
- 4.3.5 The proposed development is therefore ideally placed to take advantage of the cycle connections around Deeside. In summary, it is considered that cycling is a highly realistic mode of travel for future employees at the proposed development site.

4.4 Public Transport Accessibility

- 4.4.1 The site is well situated to take advantage of existing public transport infrastructure. **Plan 079407-CUR-00-XX-DR-TP-06005-P01** demonstrates the areas accessible via public transport within 20, 40 and 60 minutes of the site. Figure 4.3 below illustrates the public transport catchment.

Interim Travel Plan

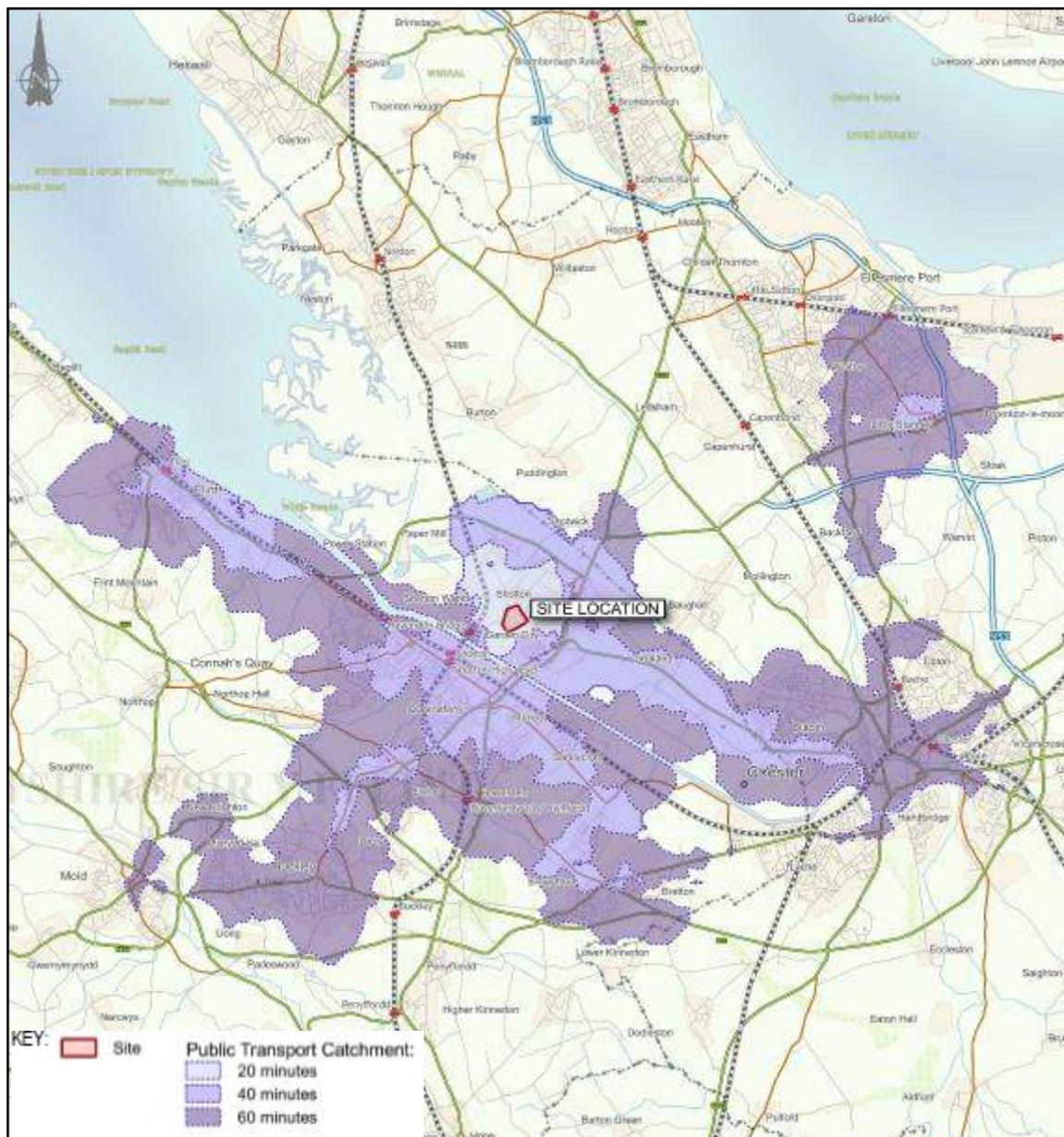


Figure 4.3 – Public transport catchment

4.4.2 It is evident from Figure 4.3 that within 20 minutes travel, access can be gained to Garden City, Shotton and parts of Queens Ferry. Within 40 minutes access can be gained to Shotwick, Shotton, Ewloe, Buvckley and surrounding areas. Within 60 minutes of public transport travel, access can be gained to Holywell and Mold to the west, Birkenhead to the north, Frith and Lache to the south and Dunham-on-the-hill to the east.

4.4.3 Accessibility by bus and rail are considered in further detail below.

Interim Travel Plan

Bus

4.4.4 The Chartered Institution of Highways and Transportation (CIHT) document, 'Planning for Public Transport in Developments' recommends that developments should ideally be located within 400m of a bus stop. The nearest bus stop is located on B5441 Welsh Road which is approximately 350m from the centre of the site.

4.4.5 A summary of the existing service bus service is provided in **Table 4.2** below.

Bus Service	Journey	Frequency		
		Monday to Friday	Saturday	Sunday
5	Mold – Deeside – Ellesmere Port	60 mins	60 mins	N/A
8	Mold – Sealand Manor	120mins	120mins	N/A
D1	Connah's Quay - Garden City-DIP	60mins	60	60
10/10A	Flint – Connah's Quay -Chester	30 mins	30 mins	60 mins

Table 4.2 – Bus Service Summary

4.4.6 **Table 4.2** confirms that there are frequent bus services within acceptable walking distance of the site to the destinations identified in **Figure 4.3** above.

4.4.7 In summary, it is considered that the site is accessible by bus services.

Rail

4.4.8 The Chartered Institution of Highways and Transportation (CIHT) document, 'Planning for Public Transport in Developments' notes that visitors travelling to a site by rail will typically be prepared to walk further to the site than visitors travelling by bus, with a preferred distance of 800m. Hawarden Rail Station is located approximately 1.2km from the site.

4.4.9 The distance from the site to the railway station is within the preferred maximum walking distance for commuting trips and is likely to be viable for some employees. It could also be used as part of multimodal journey for employees that are unable walk longer.

4.4.10 Hawarden rail station is well served with services that operate every hour each way (Monday to Saturday daytime) between Wrexham Central and Bidston. On weekday evenings & bank holidays, the frequency drops to two-hourly and on Sundays there are six departures each way. Passengers can change at Bidston for Liverpool, Shotton for North Wales, Chester, and Manchester Piccadilly and at Wrexham General for Shrewsbury, Birmingham New Street, Hereford and South Wales.

Interim Travel Plan

4.4.11 In addition to the public transport opportunities highlighted above, the Deeside Local Plan published in 2018 proposed the establishment of two new railway stations: Deeside Parkway and Broughton Parkway, in proximity to the site (shown in Figure 4.4) below in order to improve transport services and the connectivity of Deeside.



Figure 4.4 – Proposed new rail stations. Source: Deeside Local Plan

4.4.12 The Deeside Local Plan also proposes to maximise Park and Share facilities to assist in targeting congestion whilst providing commuters with additional multi-modal transport options. Instead of car-sharing from the start of a journey, commuters can meet at a convenient location and continue to their

destination in one vehicle. This further encourages multi-modal and sustainable transport patterns which could benefit future employees of the proposed development.

4.5 Summary

4.5.1 In summary, the site is located such as to benefit from existing walking, cycling and public transport opportunities. The site is located in close proximity to a variety of key services and facilities as well as a number of pre-existing residential areas. The site is therefore considered to be accessible from sustainable modes of travel in line with national and local transport planning policy.

5.0 Travel Plan Initiatives

5.1 Introduction

5.1.1 Taking into account the location of the proposed development and the accessibility of the site via walking, cycling and public transport, a series of measures and initiatives have been developed to encourage sustainable travel at the site.

5.1.2 This section of the ITP sets out the initiatives that could be implemented in a full employee Travel Plan in order to reduce employees' dependency on the private car and encourage sustainable modes of travel. The initiatives below are in line with the aims and benefits set out in **Section 2** of this document.

5.2 Production of Welcome Packs

5.2.1 Welcome packs can be critical in influencing travel patterns and therefore it is envisaged that welcome packs will be supplied to all staff at the development upon moving in. The contents of the welcome packs could include:

- Introduction to the TP concept detailing objectives and aspirations;
- Literature on the health benefits of walking, cycling and environmental benefits of sustainable modes of transport;
- Maps showing local walking / cycling routes and places of interest;
- Details of public transport services, including timetables and routes; and
- Details of the Travel Plan Co-ordinator (TPC).

5.2.2 As well as providing such information throughout the welcome packs, community notice boards in communal areas could also be provided to detail relevant information as set out above.

5.3 Measures to Encourage Walking

5.3.1 Walking is the most sustainable and accessible mode of travel. Any individual in relatively fair health can incorporate walking into part of their journey. Furthermore, 30 minutes of moderate activity 5 or more times per week is likely to enhance the health and fitness of the individual.

5.3.2 The following measures will be considered in order to encourage employees to walk:

- Raise awareness of the health benefits of walking;
- Clear signing of pedestrian routes within and adjacent to the site;
- Information on the local pedestrian routes, including public footpaths; and
- Promotion of national and local walking campaigns and initiatives.

5.4 Measures to Encourage Cycling

5.4.1 It has been demonstrated throughout **Section 4** of this ITP that there is a there is existing opportunities to cycle in the surrounding area. Cycle parking would be provided as part of the development. To encourage employees to cycle, the following measures will be considered:

- Information on the local cycle network routes made available through the previously discussed welcome packs;
- Promote the availability of cycling information, including route maps and useful tips and guidance from the “Sustrans” website www.sustrans.org.uk;
- Provide on-site shower and changing facilities for employees;
- Provide an on-site puncture repair kit for employees use;
- Encourage local cycle clubs/forums to be invited to take part in Travel Plan promotional events to raise awareness;
- Initiate a “cycle buddy scheme” and arrange cycle training for those not confident about cycling;
- Register the employer to the Cycle2Work scheme; and
- The setting up of an employee Bicycle User Group (BUG).

5.5 Measures to Encourage Public Transport

5.5.1 It has been demonstrated throughout **Section 4** of this ITP that the site is highly accessible by public transport, and that there are further opportunities for wider public transport travel from other cities such as Manchester, Preston and Liverpool. The following measures will be considered in order to encourage employees to travel by public transport:

- Distribute details of the Traveline Journey Planning tool for the Wales. Future employees can contact Traveline Cymru by phoning 0800 464 0000. They can also utilise the Traveline website;
- Provide up to date bus information including timetables and contact information in the welcome packs;
- Advertise any promotions/discounts offered by public transport operators;
- Liaise with bus companies and Flintshire County Council on any future improvements and/or extensions to local services; and
- Limited time discount tickets could be provided in the previously discussed welcome packs.

5.6 Car Sharing

5.6.1 Car sharing is an effective way of reducing single occupancy car trips if a number of employees travel to the same location each day. It is envisaged that car sharing website www.liftshare.com could be promoted to future employees of the site.

Interim Travel Plan

5.6.2 Alongside promoting this, it would be appropriate to raise awareness of car ownership costs and highlight the social and economic benefits of car sharing.

5.6.3 It is envisaged that the Travel Plan Coordinator (TPC) could include the details for the car sharing service in the aforementioned welcome pack.

5.7 Reducing the Need to Travel

5.7.1 An effective way of lessening the travel impact of a commercial development is to reduce the need to travel in the first instance. Therefore, the following measures will be considered:

- Providing the option for staff to work from home where possible;
- Provide video and audio teleconferencing facilities;
- Promoting nearby or on-site services; and
- Implement a policy of using local suppliers.

6.0 Travel Plan Targets

6.1 Introduction

6.1.1 This section of the TP identifies targets that will help to guide the TP in meeting its objectives.

6.1.2 As a direct result of the 'measures' to be introduced, a number of mode share targets have been set to reduce private car and public transport use and encouraging active forms of travel.

6.2 Travel Plan Targets

6.2.1 The TP indicative targets are based on SMART principles:

- Specific (identify what is to be achieved);
- Measurable (over the target period);
- Achievable (linked to overall objectives and aims);
- Realistic (must be achievable over time allocated); and
- Timed (a defined action plan including dates for achievement).

6.2.2 Setting SMART targets is essential to provide a purpose and focus for the TP. A number of targets have been adopted. These targets are divided amongst those relating to delivering outputs and those related to achieving outcomes as explained below;

- **Output targets** – These targets relate to the implementation of the measures to be introduced as part of the Travel Plan (TP). They would help to ensure that the TPC remains on course with the delivery of the different measures contained within this TP;
- **Outcome targets (modal shift)** – These targets relate to the effect of implementing the TP measures and will include for example reducing the overall proportion of journeys being undertaken from the site by car.

6.3 Output Targets

6.3.1 Details of the output targets, responsibilities for delivery and associated time scales are outlined in Table 6.1.

Interim Travel Plan

Output Target	Responsibility	Timescale
Appoint and fund a site Travel Plan Coordinator	ICT	Upon appointment of TPC
Ensure cycle parking is adequate to accommodate the demand	ICT	
Prepare Inductions Packs	TPC	Upon appointment of TPC
Promote travel planning measures	TPC	Upon appointment of TPC
Undertake first travel survey	TPC	Year 1
Analyse results of travel survey and provide reports	TPC	Following monitoring phase
Informs staff of sustainable travel modes to the site and display travel information in strategic area visible to all employees	TPC	Upon appointment of TPC
Continue to promote the travel plan and it's aims and objectives through various channels, to reach to 100% of employees	TPC	Upon appointment of TPC and ongoing
Yearly sustainable travel campaigns	TPC	Upon appointment of TPC and ongoing

Table 6.1 – Output Targets

6.4 Existing Mode Share

6.4.1 To derive the modal share of people travelling to the site, Curtins has used journey to work by mode data based on the 2011 census from the output area 'Flintshire 007 and 008'. The existing mode share derived is summarised in Table 6.2 below.

Interim Travel Plan

Travel Mode	Census Mode Share
Underground, metro, light rail or tram	0%
Train	1%
Bus, minibus or coach	4%
Taxi	1%
Motorcycle/Scooter	1%
Driving a car or van	76%
Passenger in a car or van	8%
Bicycle	3%
On foot	6%
Other	0%
Total	100%

Table 6.2 – 2011 Census

6.4.2 Table 6.2 indicates that the highest proportion of employees are expected to travel by car (76%), followed by car passenger (8%), followed by foot (6%), by bus (4%) and cycle (3%).

6.4.3 For the purpose of this ITP, the mode share has been combined as follows:

- Public Transport (Underground, metro, light rail or tram, Train and Bus, minibus or coach); and
- Active Modes (Bicycle and On foot).

6.4.4 Based on the above, the resulting mode share is presented in Table 6.3.

Mode	Existing Mode Share
Private Vehicle	76%
Car Passenger	8%
Taxi	1%
Public Transport	5%
Active Modes	9%
Motorcycle/Scooter	1%
Total	100%

Table 6.3 – Existing Mode Share

6.4.5 It is evident from Table 6.3 that majority of employees (76%) travel by private vehicle, 9% by active modes, 8% as car passengers, 5% by public transport and 1% by motorcycle/scooter. It is the aim of this ITP to decrease the private car trips and increase the number of trips undertaken by public transport and active modes.

6.5 Indicative Mode Split Targets

- 6.5.1 The suggested targets represent what is considered to be an achievable increase in sustainable travel by future employees as a result of the introduction of the TP. These targets are based on the initial mode share derived from existing travel patterns for developments of similar nature.
- 6.5.2 The site is connected by public transport and pedestrian/cycle infrastructure and therefore this is considered achievable.
- 6.5.3 The targets set out below are applicable to able body and disability impaired persons. Therefore, the targets have been developed to achieve modal shift from private car to public transport and active modes (walking and cycling).

Mode	Existing Mode Share	Year 3	Year 5	Targets
Private Vehicle	76%	-5%	-5%	66%
Private Vehicle	8%	0%	0%	8%
Taxi	1%	0%	0%	1%
Public Transport	5%	2.50%	2.50%	10%
Active Modes	9%	2.50%	2.50%	14%
Motorcycle/Scooter	1%	0%	0%	1%
Total	100%	0%	0%	100%

Table 6.4 – Indicative Future Mode Split Targets

- 6.5.4 The targets above are to decrease private car use by 10%. It is intended to encourage that these users to transfer to public transport (5%) and active modes (5%).
- 6.5.5 Where possible, staff will be encouraged to travel by active modes instead of by public transport.
- 6.5.6 A separate target that is linked to the mode split is to ensure 100% of staff are aware of the travel plan and its aims and objectives by the end of Year 1.

7.0 Monitoring and Review

7.1 Introduction

7.1.1 This section of the report sets out the proposed management arrangements associated with the ITP. It also sets out the next steps with regards to converting this ITP into a full Travel Plan.

7.2 Responsibility and Management

7.2.1 Overall responsibility for the ITP will lie with ICT. Following construction and full occupation, the ITP will need to be updated to a full Travel Plan. This will involve the distribution of travel surveys.

7.3 Travel Plan Coordinator (TPC)

7.3.1 The TPC will take responsibility for ensuring that the various elements of the plan are monitored and operate effectively to offer a genuine choice of travel modes. Typical duties include:

- Leading on the delivery of the TP;
- Representing the human face of the TP and explaining its purpose and opportunities on offer;
- Promoting individual measures/initiatives in the TP;
- Liaising with public transport operators;
- Monitoring the TP; and
- Taking a key role in reviewing the TP.

7.3.2 A TPC will be nominated for the development in due course.

7.4 Monitoring and Update of the Travel Plan

7.4.1 A baseline survey will be conducted within 3 months of the appointment of the TPC. Thereafter, surveys will be conducted in years 1, 3 and 5. The TPC will organise questionnaire and/or interview surveys aimed at obtaining updated information on the travel patterns of employees.

7.4.2 The results of monitoring surveys will be reported in a pre-agreed format to Flintshire Travel Plan Officer.

7.4.3 It is recommended that a follow up meeting be held with FCC to review the results of the monitoring survey and discuss any remedial measures required. The meeting should be arranged and chaired by the TP Co-ordinator.

7.4.4 The TPC will be responsible for monitoring on-site and off-site facilities for sustainable modes of travel. It will be the duty of the TPC to report any significant issues observed or any useful comments received

Interim Travel Plan

from staff on either on or off site facilities to the Steering Group at monitoring meetings. Along with the survey results an annual TP monitoring report will be produced by the TPC and reported to FCC.

7.5 Data Collection and Analysis

7.5.1 As the development has not yet been constructed, it is not possible to undertake any travel surveys. Therefore, it is not appropriate to provide a definitive set of targets.

7.5.2 In order to understand travel habits, travel surveys will be distributed to all staff within three months of commencement of operations. Recipients will be encouraged to participate, and the surveys would extract the following key information:

- Place(s) of residence;
- Usual mode of travel and reason for modal choice;
- Attractiveness of various sustainable modes;
- Any barriers to sustainable modes; and
- Initiatives that would encourage employees to travel more sustainably.

7.5.3 This information will enable analysis to be undertaken to establish final targets. It will also provide information on reasons for that modal split and identify any measures that may encourage a modal shift.

8.0 Action Plan

8.1 Introduction

8.1.1 **Table 8.1** below summarises the key actions from the document by providing an Action Plan for the Travel Plan process:

Action	Indicator	Target Date	Responsibility
Appoint TPCs	Development build nearing completion	One month before occupation	ICT
Produce Welcome Pack	TPCs appointed	Commencement of operations	TPC
Undertake Initial Travel Surveys	Commencement of operations	Within three months	TPC
Decide Modal Split Targets	Receipt of the initial Travel Surveys	Within one month of undertaking the initial surveys	TPC in conjunction with Flintshire County Council
Update ITP to a full Travel Plan	Once Modal Split Targets are agreed with Flintshire County Council	Within two months of agreeing modal splits with Flintshire County Council	TPC
Present Annual Monitoring Report	Once full Travel Plan is approved by Flintshire County Council	Annually for at least three years following the agreement of targets with Flintshire County Council	TPC

Table 8.1 – Action Plan

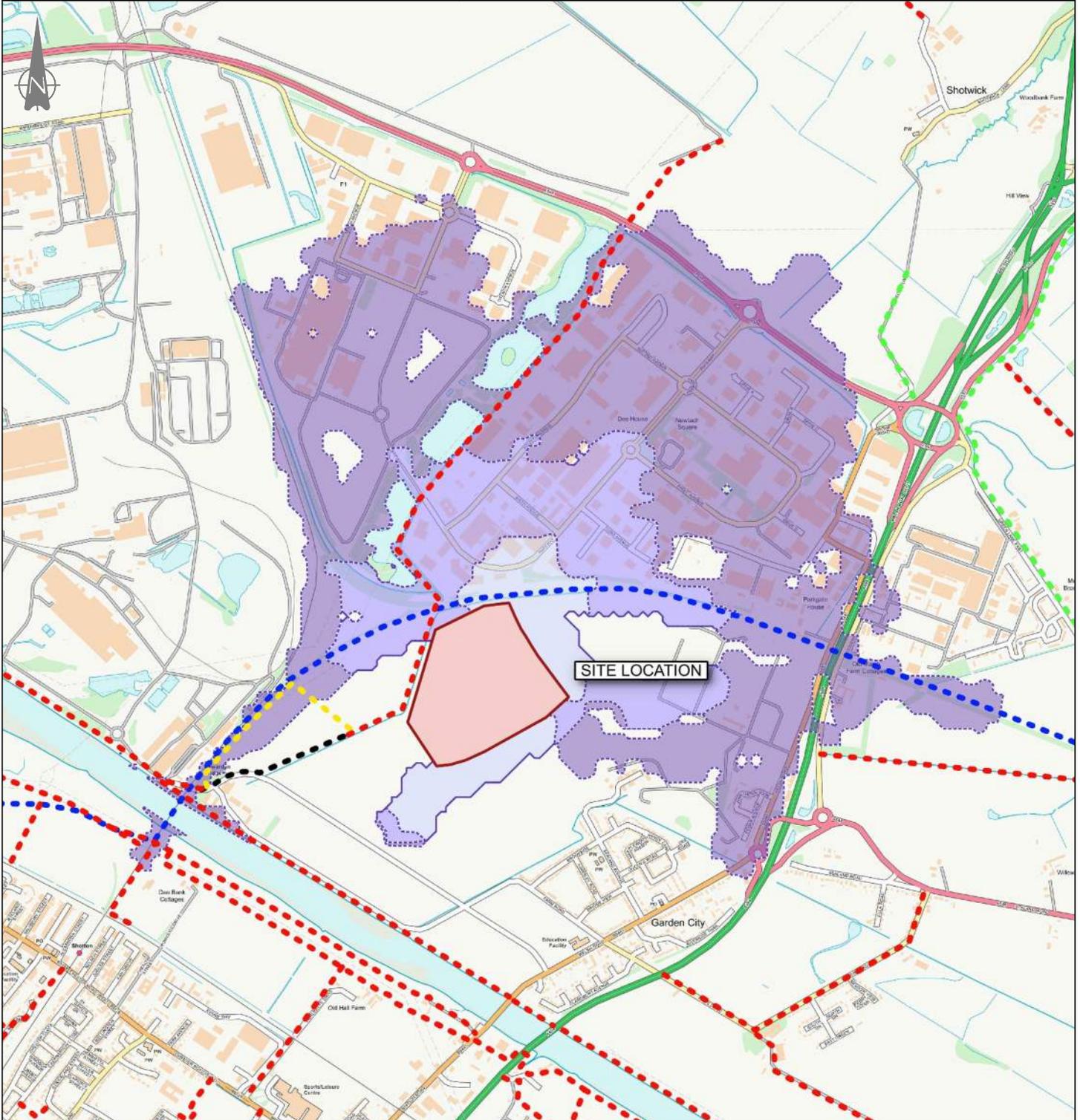
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Project: ICT DEESIDE - PLOT C		Status: PRELIMINARY	
Drg Title: ACCESSIBILITY INDICATIVE WALKING CATCHMENT		Drawn By: JM	Checked By: AT
		Designed By: JM	Date: 17/09/19
		Scale: NTS	
Project No:	Originator:	Volume:	Level:
Type:		Role:	Category / Number:
79407 - CUR - 00 - XX - DR - TP -		06003 - P01	



KEY:	Site	Existing Bridleway
	Walking Catchment: 500m	Existing PRow
	1000m	National Cycle Route 5
	2000m	PRow Diversion
		PRow To Be Stopped Up

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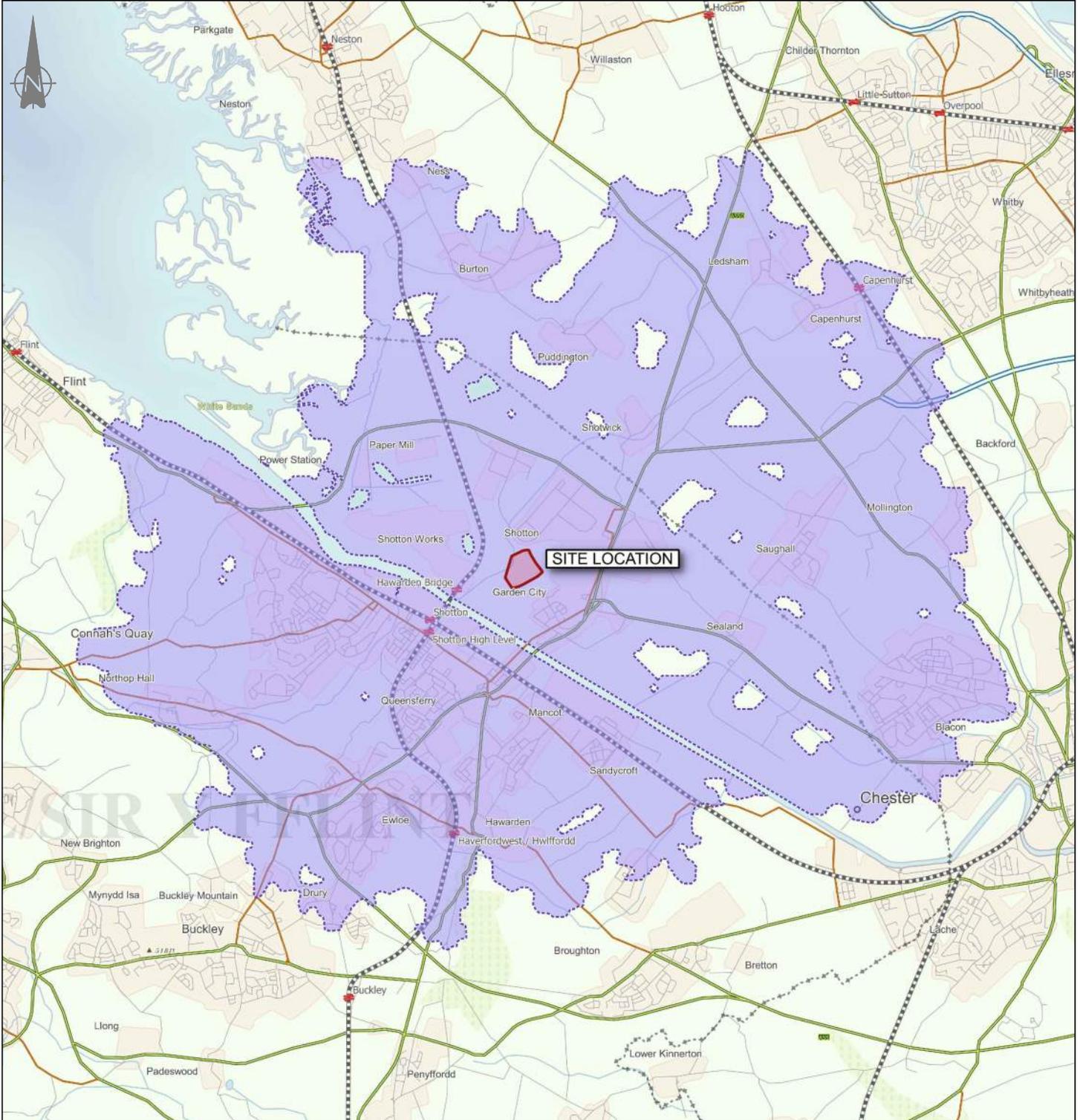
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Project: ICT DEESIDE - PLOT C		Status: PRELIMINARY	
Drg Title: ACCESSIBILITY INDICATIVE CYCLE CATCHMENT		Drawn By: JM	Checked By: AT
		Designed By: JM	Date: 17/09/19
		Scale: NTS	
Project No:	Originator:	Volume:	Level:
			Type:
			Role:
			Category / Number:
			Rev:
79407 - CUR - 00 - XX - DR - TP - 06004 - P01			



KEY:  Site  Cycle Catchment: 8000m

Appendix 2.3 – Receptors Plan



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Project: ICT DEESIDE - PLOT C

Status: PRELIMINARY

Drg Title: ACCESSIBILITY
 INDICATIVE PUBLIC TRANSPORT
 CATCHMENT

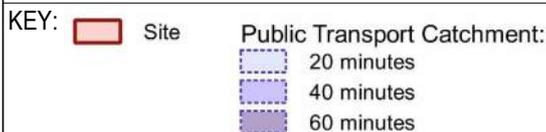
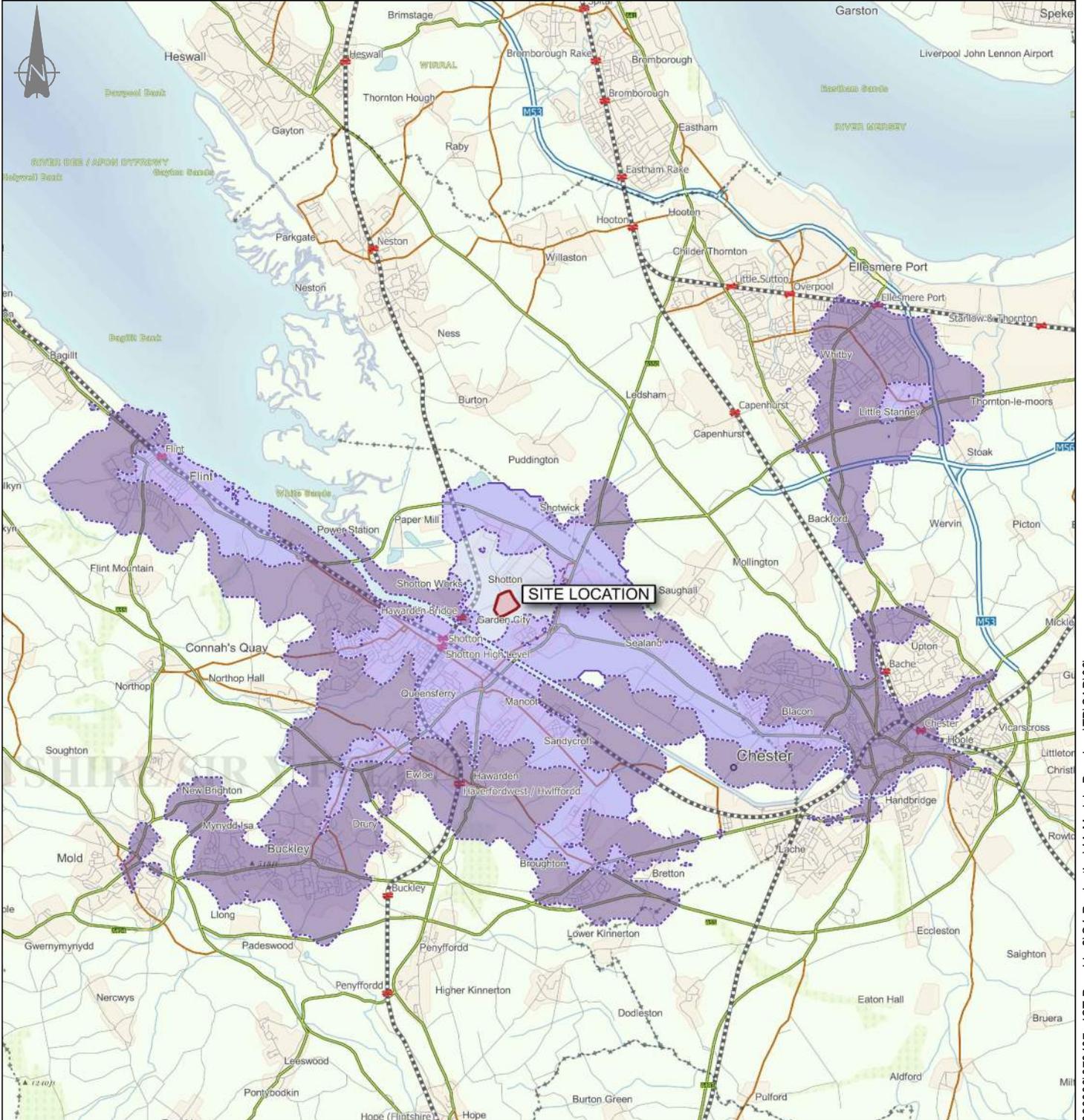
Drawn By: JM Checked By: AT

Designed By: JM Date: 17/09/19

Scale: NTS

Project No: Originator: Volume: Level: Type: Role: Category / Number: Rev:

79407 - CUR - 00 - XX - DR - TP - 06005 - P01



Appendix A – Proposed Site Layout

Schedule of Accommodation						
Zone	Ground Floor GIA	First Floor GIA	Roof Access GIA	Total GIA	Total GEA	Car Parking including (Acc.) [EV/CP]
Phase 1						
Office	635m ² / 6,830ft ²	629m ² / 6,770ft ²	15m ² / 160ft ²	1,279m ² / 13,760ft ²	1,322m ² / 14,329ft ²	97 (7) (B)
Drivers Gatehouse	90m ² / 960ft ²	-	-	90m ² / 960ft ²	110m ² / 1,184ft ²	-
Entrance Gatehouse	120m ² / 1,290ft ²	-	-	120m ² / 1,290ft ²	138m ² / 1,488ft ²	-
Main Facility	45,910m ² / 494,880ft ²	2,905m ² / 31,260ft ²	-	47,915m ² / 515,740ft ²	48,334m ² / 520,263ft ²	158 (B) (B)
High Bay Warehouse	14,950m ² / 160,920ft ²	69m ² / 740ft ²	-	15,019m ² / 161,660ft ²	15,190m ² / 163,551ft ²	-
Water Treatment	1,362m ² / 14,670ft ²	12m ² / 1,300ft ²	-	1,374m ² / 14,770ft ²	1,563m ² / 16,849ft ²	-
Mil Station	107m ² / 1,150ft ²	-	-	107m ² / 1,150ft ²	117m ² / 1,259ft ²	-
TOTAL PHASE 1 ACCOMMODATION				66,033m² / 710,739ft²	66,809m² / 718,128ft²	255 (10) (B)
Phase 2						
Office	-	-	-	-	-	-
Drivers Gatehouse	-	-	-	-	-	-
Entrance Gatehouse	-	-	-	-	-	-
Main Facility	15,865m ² / 170,760ft ²	948m ² / 10,200ft ²	-	16,813m ² / 180,960ft ²	16,885m ² / 181,748ft ²	-
High Bay Warehouse	-	-	-	-	-	-
Water Treatment	-	-	-	-	-	-
Mil Station	107m ² / 1,150ft ²	-	-	107m ² / 1,150ft ²	117m ² / 1,259ft ²	-
TOTAL PHASE 2 ACCOMMODATION				16,920m² / 182,110ft²	17,002m² / 183,007ft²	-
Phase 3						
Office	-	-	-	-	-	-
Drivers Gatehouse	-	-	-	-	-	-
Entrance Gatehouse	-	-	-	-	-	-
Main Facility	33,975m ² / 365,700ft ²	948m ² / 10,200ft ²	-	34,923m ² / 375,900ft ²	35,065m ² / 377,438ft ²	83 (D) (2)
High Bay Warehouse	5,465m ² / 58,820ft ²	-	-	5,465m ² / 58,820ft ²	5,468m ² / 58,851ft ²	-
Water Treatment	-	-	-	-	-	-
Mil Station	107m ² / 1,150ft ²	-	-	107m ² / 1,150ft ²	117m ² / 1,259ft ²	-
TOTAL PHASE 3 ACCOMMODATION				40,385m² / 434,720ft²	40,533m² / 436,293ft²	83 (D) (2)
TOTAL ACCOMMODATION				123,341m² / 1,327,569ft²	124,344m² / 1,338,430ft²	338 (16) (B)

Notes:
 • Electric vehicle car charging to be 5% delivered of total number of car parking spaces and 5% ducted for future installation.
 • Areas shown subject to confirmation.

ELECTRIC VEHICLE CAR PARKING SPACES SHOWN AS 'E'. SPACES TO BE DUCTED SHOWN 'D'.

AREA TO BE SEEDED WITH GRASS BUT SAFEGUARDED FOR FUTURE POTENTIAL EXTERNAL PLANT - NOT INCLUDED IN THIS PLANNING PERMISSION

HBW FOOTPRINT = 16,638 m² / 179,090 ft²

RED LINE PLOT BOUNDARY 23.86 HA / 58.96 ACRES

SUB STATION AND ASSOCIATED LANDSCAPING AND ENABLING WORKS ARE ALL OFF PLOTS WORKS SUBJECT TO SEPARATE PLANNING APPLICATIONS AND OR APPROVALS BY CHEL

GAS METER

EMERGENCY ACCESS ONLY

WELSH GOVERNMENT COMMERCIAL SPINE ROADS 2 AND 3 AND ASSOCIATED INFRASTRUCTURE IS SUBJECT TO SEPARATE RESERVED MATTERS APPLICATIONS APP. REF: 063191 AND 063187

COGENERATION_1

COGENERATION_2

COGENERATION_3

PULP STORAGE_A1

BALE HANDLING_B1

PM HALL_B1

PULP STORAGE_A2

BALE HANDLING_B2

PM HALL_B2

PULP STORAGE_A3

BALE HANDLING_B3

PM HALL_B3

JUMBO ROLLS STORAGE_F1

JUMBO ROLLS STORAGE_F2

JUMBO ROLLS STORAGE_F3

RAW MATERIALS_G1

CONVERTING_G1

CONVERTING_G3

DISPATCH_M

TW

REWINDER_E

B2B_E

HBW_L1

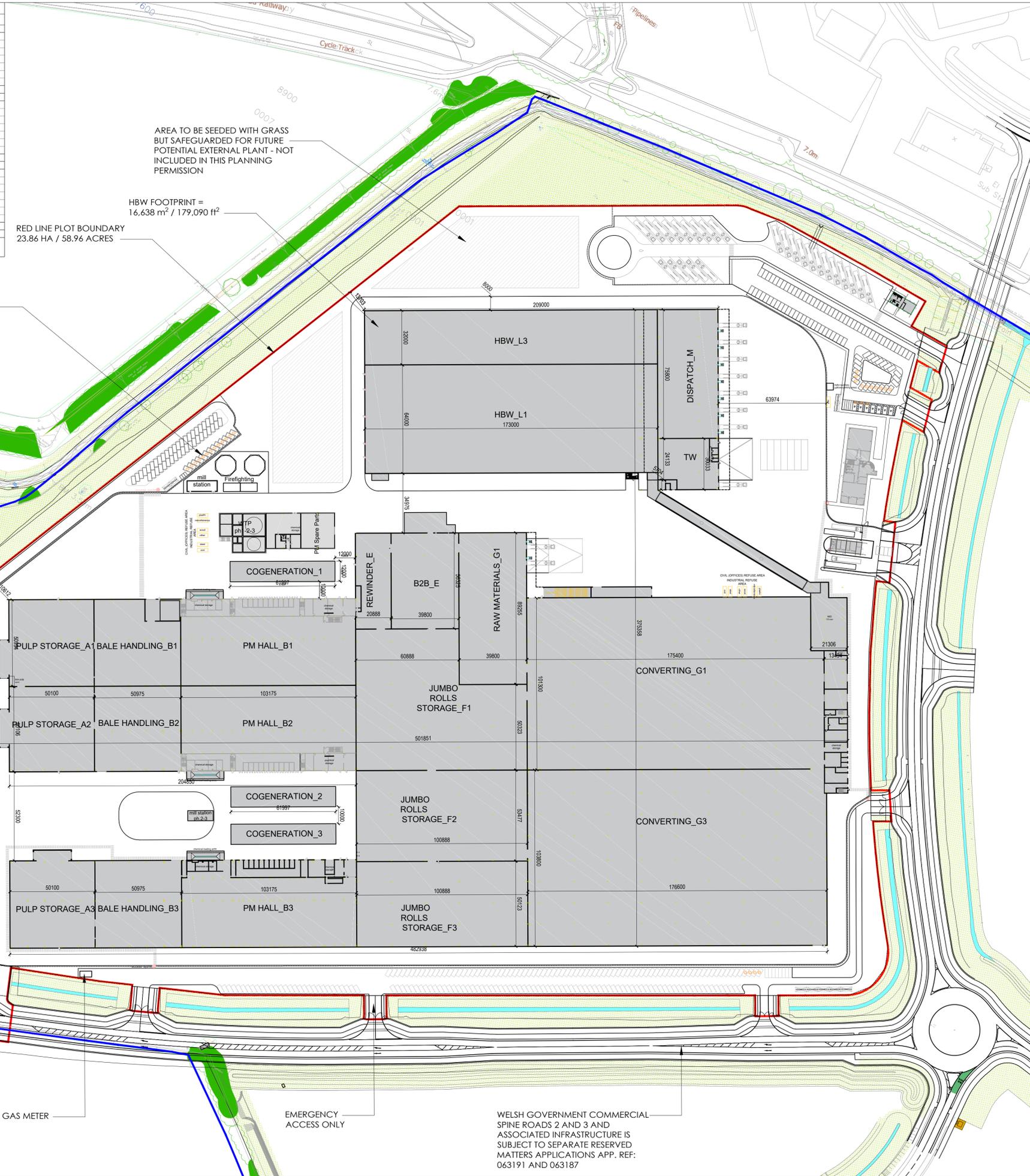
HBW_L3

Sub Station

Firefighting

mill station

PH 2-3



NOTES

- All dimensions and levels are to be checked on site.
- Any discrepancies are to be reported to the architect before any work commences.
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- All works are to be undertaken in accordance with Building Regulations and the latest British Standards.
- All proprietary materials and products are to be used strictly in accordance with the manufacturers' recommendations.

CDM 2015

Client notified of duties: **Yes**
 Principal Designer: **TBC**

Unless noted below, all known hazards have been highlighted on the drawing:

0 20 40 60 80 100m
 Scale 1:2500 @ A1

P8	17/09/2021	MB	DOH
Dims updated			
P7	14/09/2021	MB	DOH
Additional dims added. HBW footprint noted.			
P6	25/08/2021	TF	DOH
Schedule of accommodation updated.			
P5	24/08/2021	TF	DOH
Schedule of accommodation updated to Lichfields comments. References to off-plot infrastructure by others added.			
P4	20/08/2021	MB	DOH
Office, gatehouse and driver's hub shown. Areas updated			
P3	11/08/2021	MB	DOH
Layout updated to latest Client layout.			
P2	28/07/2021	TF	DOH
Layout updated to latest Client layout. Red line updated to correct base information.			
P1	20/07/2021	MB	DOH
Initial issue			
REV	Date	Drawn by -	Checked by -
Status	Purpose of Issue		
S2	For Information		
drawing stage	Stage 3		
client	Industrie Cartarie Tronchetti SpA		
project	ICT Paper Mill Deeside		
drawing title	Proposed Site Plan		
date	20/07/2021	drawn	MB
scale@A1	1:1250	checked	DOH

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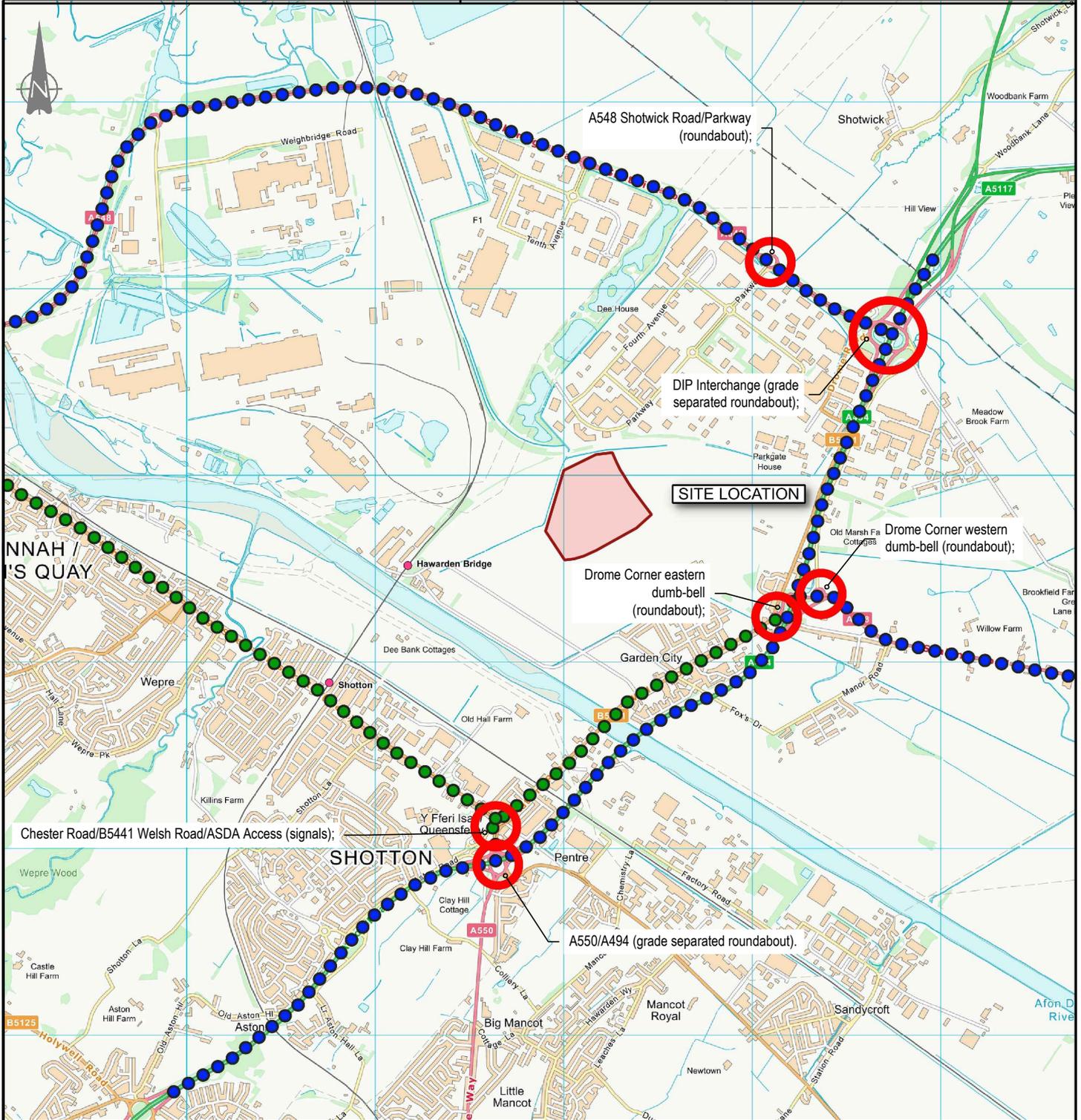
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Project:	ICT DEESIDE		Status:	PRELIMINARY			
Drg Title:	ES RECEPTOR PLAN		Drawn By:	JM	Checked By:	AT	
Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
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KEY:

	Site		District / Borough Highway
	Key Junction		Local Highway

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