Application for a transitional water resources licence

Form WRH

Fill in this form if you are applying for a transitional water resources licence to continue a previously exempt abstraction.

This form is available in both English and Welsh. Please check that this is the latest version of the form available from our website before submitting your application.

Please ensure you use Guidance Note WRH to help you.

All relevant guidance documents can be found on our website.

Contents

1. Application type and fee

1.1 Please select your application type from the list below.

A new transitional water resources full abstraction licence for a previously exempt abstraction	☒
A new transitional water resources transfer licence for a previously exempt abstraction	☒
A variation to an existing full abstraction licence to add a previously exempt abstraction	☐
A variation to an existing transfer licence to add a previously exempt abstraction	☐

1.2 Please indicate the amount and how you wish to pay your application

Amount paid	1635		
Cheque	☐		
Credit or debit card	☒		
BACS transfer	☐	BACS reference number	PRC

2 Applicant and agent details

This is the individual or organisation any resulting licence will be issued to, and must be a legal entity. If you are an agent acting on behalf of an applicant, provide their details here and yours in section 2.2.

2.1 Applicant details

Individual	☐	Public body	☐
Registered company	☒	Organisation or group of individuals	☐
Other	☐	If ‘Other’, please specify	

Title		

First name	
Last name	
Company, charity, body, or trading name (if relevant)	Tarmac Trading Limited
Registered company or charity number (if relevant)	00453791
Address	Portland House
	Bickenhill Lane
	Solihull
	Birmingham
Postcode	B37 7BQ
Telephone - mobile	
Telephone - office	
Email address	

We will contact you by email unless you tick here. ☐

2.2 Agent details

This is who we will correspond with unless otherwise informed. If you are an agent applying on behalf of an applicant, please include a letter of authorisation from the applicant allowing you to act as signatory,and provide a reference for this document in the box below.

Document reference		
Title		
First name		
Last name		
Company or trading name		
Position in company		
Address		

Postcode	
Telephone - mobile	
Telephone - office	
Email address	

We will contact you by email unless you tick here. ☐

2.3 Site operation contact

Please specify who we should contact with regard to your site operation.

Applicant ☐

Agent ☐

Other ☒ Please provide contact details for the operational contact on a separate referenced document, and tell us this reference below.

Document reference: Supporting Document H074NA2019

2.4 Abstraction invoices and records contact

Please specify who we should contact for invoices and abstraction records (returns). Please note that these may not be not required for transfer licences.

Invoice address

Applicant ☐

Agent ☐

Other ☒ Please provide contact details for the operational contact on a separate referenced document, and tell us this reference below.

Document reference: Supporting Document H074NA2019

Abstraction records

Applicant ☐

Agent ☐

Other ☒ Please provide contact details for the operational contact on a separate referenced document, and tell us this reference below.

Document reference: Supporting Document H074NA2019

3. Site name

3.1 Please provide the site name below:

Site name	Hendy Quarry

4. Entitlement to apply

4.1 Have you abstracted water between 01 January 2011 and 31 December 2017 for the activity which you are applying to be licensed?

Yes ☒

No ☐ Please see our water abstraction and impounding webpage for further information on the correct applicaton forms.

4.2 What is your connection to the land where the abstraction takes place?

Please provide a map outlining your land ownership/occupation and include all abstractions and discharges where relevant.

Owner ☒

Occupier ☐

Document reference | Supporting Document H074NA2019

4.3 Do you have a legal right of access to the land where the abstraction take place?

No ☐

Yes ☒ Please provide further detail in the box below. If necessary continue on a separate referenced document, and tell us this reference.

Document reference | Supporting Document H074NA2019

5. Existing licence number(s)

If you are applying to change an existing licence please provide the licence number below.

Licence number(s)

6. Cross border applications

As part of your site operation do you also abstract for a previously exempt activity in England?

No ☒

Yes ☐ Please provide detail of this cross border application in the box below. If possible, provide a reference or application number, or name of an Environment Agency contact with whom the application has been discussed.

Continue on a separate referenced sheet if necessary and tell us the reference for this document.

Document reference

7. Abstraction details

7.1 Site map

Please provide a map with details of the location(s) you abstract water from (points reaches, or areas). Tell us the reference for this map, below.

Site map reference	Supporting Document H074NA2019 Appendix B

7.2 Please tell us details about the location(s) you abstract water from (points reaches, or areas) in the tables below.

The abstraction location, name, or reference must be the same as those used on the site map, in question 7.1. If you need more space, please continue on a separate referenced sheet if necessary and tell us the reference for this document

Document reference	Supporting Document H074NA2019

Table 7. 1 - Surface water abstractions						
Abstraction location name or reference (As labelled on the site map)	Type of location (single point, reach, area)	Source of Supply	First National Grid Reference (12 digits)	Second National Grid Reference (12 digits)	Third National Grid Reference (12 digits)	Fourth National Grid Reference (12 digits)
Quarry Sump	Area	Rainfall	ST 05326 81142	ST 05542 81193	ST 05599 81065	ST 05329 81052

If necessary, continue on a separate sheet and tell us the reference for this document.

Document reference(s)

Table 7. 2 Ground water abstractions										
Abstraction location name or reference (as labelled on map)	Source of Supply	National Grid Reference (12 digit)	Overall depth (metres)	Maximum diameter (millimetres) or area of excavation (square metres)	Screened section (metres below ground level)	Drift geology	Solid geology	Rest pump water level	Pumped water level	Pump Depth
Quarry Sump	Ground Water	ST 05395 81075		730 sq.m	N/A	N/A	Carboniferous Limestone	45.7mAOD		1m

If necessary, continue on a separate sheet and tell us the reference for this document.

Document reference(s)

8. Abstraction history and evidence

8.1 Please complete table 8.1 to document that the abstraction(s) and transfer(s) has or have been taking place during the qualifying period.

If necessary, continue on a separate sheet and tell us the reference for this document.

Document reference(s)

Table 8.1

Year	Abstraction location name or reference (as labelled on map)	Purpose(s) water used for	Period of abstraction	Maximum quantities abstracted						Means of measurement, or assessment of abstracted quantities	Are these the maximum quantities of water you wish to have licensed? (Yes or No)
			All year, or months, or days (provide specific dates)	Year (cubic metres)	Day (cubic metres)	Hour (cubic metres)	Peak instantaneous flow rate (litres per second)	Maximum number of hours of abstraction per day	Please indicate whether volume is actual (A) or estimated (E)		
01 January 2011 to 31 December 2011											
01 January 2012 to 31 December 2012											
01 January 2013 to 31 December 2013											
01 January 2014 to 31 December 2014	Quarry Sump	Transfer to Discharge	All Year	150,090	6,600	216	60	24	A	Meter	No
01 January 2015 to 31 December 2015	**Quarry Sump**	**Transfer to Discharge**	All Year	182,964.7	3,918	216	60	24	A	Meter	Yes (Only Annual, hourly and instant rate, the daily rate should be limited to the discharge volume)
01 January 2016 to 31 December 2016	**Quarry Sump**	**Transfer to Discharge**	All Year	163,871.6	4,580	216	60	24	A	Meter	No
01 January 2017 to 31 December 2017	**Quarry Sump**	**Transfer to Discharge**	All Year	88,101.3	2,406	216	60	24	A	Meter	No

8.2 Please complete the table below if you wish a lesser quantity of water to be licensed than that detailed in table 8.1.

If necessary, continue on a separate sheet and provide a reference for this document.

Document reference | Supporting Document H074NA2019

Table 8.2

Abstraction location name or reference (as labelled on map)	Purpose water is used for	Abstraction period	Maximum annual abstraction volume (cubic metres)	Maximum daily abstraction volume (cubic metres)	Maximum hourly abstraction volume (cubic metres)	Maximum number of hours of abstraction per day	Peak abstraction rate (litres per second)
Quarry Sump	Wheel Wash	All Year	50,034	181.94	15.16	12	26.6

8.3 Do you wish your abstracted quantities to be aggregated?

You can aggregate:

i) across some or all of the abstraction points, or reaches, or areas listed above.

ii) with other abstractions you wish to have licensed through the transitional process.

iii) abstractions you need to have licensed through the standard licensing process.

iv) with existing licences you hold.

No ☒

Yes ☐ Provide details of any proposed aggregation in the box below. If necessary, continue on a separate sheet and provide a reference for this document.

Document reference

8.4 Please provide a detailed description of how the abstraction(s) has/have taken place

Use the box below to tell us about your abstraction(s). The description should include the following:

- A diagram or schematic of how the activity has been undertaken, using your abstraction point references and including any discharge points
- Details of the structure and equipment involved in the abstraction. This should include dimensions.
- Details of your means of measurement or assessment of abstraction quantities method

If necessary, continue on a separate sheet and tell us the reference for this document.

Document reference | Supporting Document H074NA2019

8.5 Please list the evidence you are providing to support your application

Use the box below. The evidence should demonstrate the following:

- That abstraction has taken place at some time during the seven year qualifying period.
- The quantities of water you have abstracted during the qualifying period. For example, records of meter readings, or cropping plans.

If necessary, continue on a separate sheet and provide a reference for this document.

Document reference: Supporting Document H074NA2019

The supporting document summarises the water movement from the quarry sump to discharge with the added consumptive element of the wheel wash. The appendicies show proof of land access, tenure, the pumping data sheet and the wheel wash data sheet. Wheel wash volumes are not directly metered and therefore the volumes are estimated based on the technical data

A technical report prepared by Stantec (formally ESI) provides a quantative analysis of the discharge as evidence of the ground water surface water relationship. (Appendix E)

9. Discharge details

9.1 Please provide details on any discharge of abstracted water in table 9.1 below and on the map used to show abstraction locations.

If necessary, continue a separate sheet and provide a reference for this document.

Document reference: Supporting Document H074NA2019

Table 9.1 - Details of any discharge of abstracted water

Discharge location name or reference (as labelled on map)	National Grid Reference of discharge point (12 digit)	Total volume discharged (cubic metres)	Environmental Permit number for Water Discharge Activity number (if applicable)
Soakaway	ST 05380 81360	5000 per day	EPR/KP3795FU/V007

9.2 Please provide a description of discharge structures and equipment

If necessary, continue a separate sheet and provide a reference for this document.

Document reference: Supporting Document H074NA2019

10. Eel considerations

Does your abstraction include measures to safeguard eels?

No ☒

Yes ☐ Provide details below

11. Trickle Irrigation

If you are applying to licence a trickle irrigation abstraction, do you wish to apply for a Two-Part Tariff agreement with your application?

No ☒

Yes ☐ We will contact you during determination of your application to arrange this agreement.

12. Planned abstractions

12.1 Do you expect to increase the current rate of abstraction for the activity you are applying to have licensed from 01January 2018 onwards or to carry out further new abstractions (both termed 'planned' abstractions) at this site in the future?

No ☒

Yes ☐

12.2 Have you submitted a licence application (s) for any planned abstraction(s) as a result of the Water Act 2003 changes?

No ☒

Yes ☐ Provide a reference number if you have already submitted an application(s) to cover any planned abstractions.

Document reference

13. Other abstractions

Please provide details of any other abstraction(s) (licensed or exempt) that are associated with this application in table 13.1 below.

Table 13.1 - Details of any other abstraction(s) (licensed or exempt) that are associated with this application

National Grid Reference (12 digit) of where you abstract water	Source name and type	Purpose of abstraction	Where do you use the water?	When do you abstract the water?	Is this a pending application, or already licensed? Please provide the application or licence number as appropriate
ST 05320 81110	Undergorund strata in Miskin, Rhondda Cynon Taff	Industrial for washing quarried materials	Mineral Wash Plant	All Year	21/57/31/0010

14. Planning permission

Complete table 14.1 below and provide details of any planning permissions or advice associated with the abstraction you are applying to have licensed where relevant. Provide a copy of any permissions or advice,providing a reference for this document below.

Document reference | Supporting Document H074NA2019

Table 14.1 – Planning permission

Abstraction location name or reference (as labelled on map	Is planning permission needed, Yes or No?	Planning permission status (if required)	Have you received any planning advice for the abstraction?
Quarry Sump	Yes	Granted - 13/1221/10	

15. Environmental impact assessment(EIA)

Does your application require an EIA under The Water Resources (Environmental Impact Assessment) (England and Wales) Regulations 2003 (as amended)

No ☒

Yes ☐ Please provide a copy of your environmental impact assessment; provide a reference for this assessment below.

Document reference

16. Licence duration

Tell us when you wish your abstraction licence to end

Normally abstraction licences are granted for between 6 and 18 years in line with the catchment licence common end date. If you require a shorter or longer duration licence, please provide details and your justification in the box below.

If necessary, continue a separate sheet and provide a reference for this document.

Document reference

17 Declaration and data protection and commercial confidentiality

Data protection:

Please read the guidance carefully for details on who can sign this section and note the information relating to the Data Protection Act 1998, our Public Register and exclusions.

Commercial confidentiality:

Do you think your application should be confidential, and that information should not be placed on the public register?

No ☒

Yes ☐ You must send us supporting information to tell us why. Use the box below or a separate sheet, and tell us the reference you have given this document.

Document reference

Declaration:

By signing below, you are declaring that as far as you know and believe the information given in this form, on any map and in any supporting or additional information is true.

A printed name in the 'signature' response box will be treated as the equivalent of an electronic signature.

Title	Miss
First name	Lisa
Last name	Sumner
Position	Permit and Compliance Manager
Today's date	01/08/2019

Application for a Transitional Licence – Hendy Quarry

Tarmac Trading Limited – 31st July 2019

H074NA2019

1.0 Introduction

This is the supporting document for the application for a new transitional licence of a previously exempt activity.

Hendy Quarry is a small limestone Quarry near the village of Miskin, south Wales. The quarry and offices encompass an area approximately 21.5 Hectares. The site is bounded to the north by the B4264 school road to which access is gained. To the east the site is bounded by the A4119 link road to the M4 at Junction 34. The southern boundary of the quarry is formed by a wooden ridgeline which defines the edge of the permitted area.

The quarry forms part of an outcrop of limestone running east to west immediately to the north of the Ely Valley. The limestone ridge that lies between 85-90m AOD forms a series of undulating hillocks dissected by the River Clun and its tributaries, which itself is a tributary of the River Ely. The outer ridge of Hendy Quarry forms the highest elevation of the site at some 84m AOD.

The Quarry is worked under planning permission 13/1221/10 (Application for determination of conditions for mineral site) granted by Rhondda Cynon Taf borough council in June 2015.

The site operates Monday to Friday between 0700 and 1900. Saturdays the site is open between 0700 and 1300. The quarry outputs between up to 100,000 tons a year. Based upon a 275-day working year and an average 20 tonne load size, this equates to an average of 19 deliveries per day (38 movements)

1.1 Geological Summary

The site and adjoining area is shown on the published BGS Sheet Number 262 as lying within rocks of the Lower Carboniferous Limestone Series which overlie the Upper Old Red Sandstone Group, which is of Devonian age, and comprises sandstones and conglomerates with subordinate mudstones and siltstones. The Lower Carboniferous Limestone Series totals 400 m in thickness and is divided into three groups: the Lower Limestone Shale (oldest), the Black Rock Limestone and the Hunts Bay Oolite (youngest).

- The Lower Limestone Shale Group (110 m in thickness) is dominated by shales and mudstones) with subsidiary limestones and sandstones.
- The Black Rock Limestone Group, into which the quarry is excavated, comprises limestone, shales and mudstones (some 140 m in thickness).
- The Hunts Bay Oolite Group, 150 m in thickness, comprises limestones and dolomites. Deposits above the rocks are predominantly confined to river and stream valleys and include glacial sands and gravels, boulder clay and recent alluvium.

1.2 Hydrology & Hydrogeology Summary

The site lies within the catchment of the River Ely which at its closest approach flows towards the south-east, passing some 300 m to the south west of the site. Tributaries of the River Ely drain the area of hills within which the Quarry is situated. An unnamed stream arises some 550m east of the Quarry boundary (in the vicinity of Croffta Farm) and flows south-westwards towards the River Ely. At its closest approach, it passes some 250m south of the site.

On a regional scale, the Carboniferous Limestone is classified by the NRW as a Principal Aquifer (groundwater storage area). Groundwater movement is dependent upon the extent of cracks on fissures in the rock which affect the ability of groundwater to pass through the strata.

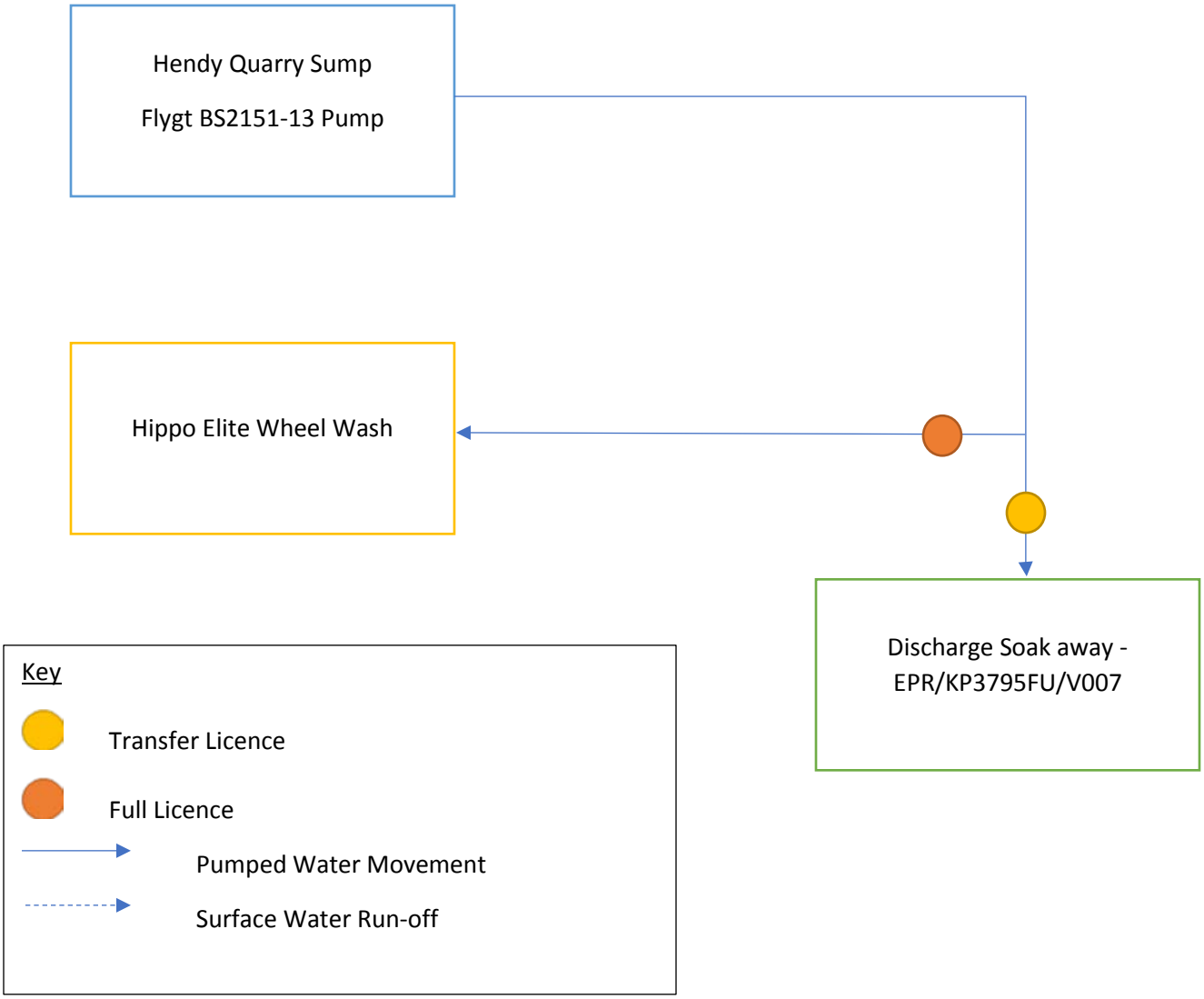
The Carboniferous Limestone is overlain by Coal Measures, which form a multi-layered Secondary Aquifer system. The water-bearing sandstone strata in the Coal Measures are separated from the Carboniferous Limestone aquifer by intervening non-aquifer strata (e.g. mudstone horizons within the Coal Measures). The Lower Limestone Shale, which represents a non-aquifer, underlies the Carboniferous Limestone.

Based upon data obtained from monitoring wells installed at the site indicate that groundwater levels in the locality decrease from 48m AOD in the north east to 42m AOD in the south west, with a level of some 45m.

The base of the quarry at an average of 45.5m AOD is above the water table. Groundwater flow at the site is towards the south west i.e. towards the River Ely and the springs/seepages in its valley. There are no surface water features upon the intervening land.

Excluding the site's abstraction borehole, the closest licensed abstraction is from Mwyndy Pool, 300 m to the north northeast of the site. Water levels in the pool average 55 m AOD. This contrasts with groundwater levels at Hendy Quarry at some 45m AOD, and it is thus considered that the Pool is hydraulically up-gradient from the site. There are no abstractions to the south west of the site, between the Quarry and the River Ely i.e. hydraulically down-gradient from the site.

2.0 Water Movement Diagram



2.1 Water Movement Summary

A mix of surface water and ground water (ratio 71% to 29%, see Appendix E) is pumped from the quarry sump using a 6-inch Flygt BS2151-13 231LT electro submersible pump. Pumping is required to keep the quarry base (45.5mAOD) from flooding in times of high rain fall. The pumping head is approximately 25m.

The water is pumped up the quarry ramp to behind the weighbridge and offices. At this point there is a pipe off the main line which feeds the wheel wash. The main line is metered after this point. The pipe goes up over an old quarry face and onto the soak away point, a consented discharge point (reference EPR/KP3795FU/V007).

Figure 1 - Image of Quarry Sump with Pumping Line (2018)

Figure 2 - (Below) Image of Pump Line Going up the Quarry Ramp (2018)

Figure 3 - Image of the Wheel Wash Line Coming off the Main Pump Line (2018)

Figure 4 - (Below) Image of the Site Wheel Wash (2018)

Figure 5 - Image of Pump Line Water Meter (2018)

3.0 Water Transfer Measured Volumes

The pumping of ground and surface water to discharge is metered. Records as far back as 2014 have been provided as part of the technical note in Appendix E. Below is a summary of the discharge volume and mean daily pumped discharge for each month from 2014 to 2017.

2014		
Month	**Pumped Discharge Volume (m^3)**	**Mean Daily Pumped Discharge (m^3)**
January	49,400	1,593.55
February	33,830	1,208.21
March	15,900	512.90
April	9,140	304.67
May	11,670	389.00
June	15,050	501.67
July	1,440	46.45
August	5,840	188.39
September	7,820	260.67
October	No Record	No Record
November	No Record	No Record
December	No Record	No Record
Total	150,090	

Table 1 - 2014 Discharge Summary

2015		
Month	**Pumped Discharge Volume (m^3)**	**Mean Daily Pumped Discharge (m^3)**
January	36,614	1,181.10
February	12,272	423.17
March	26,124	842.71
April	5,955.7	198.52
May	8,340	278.00
June	7,355	245.17
July	2,963	95.58
August	6,268	202.19
September	9,248.4	308.28
October	3,395.6	109.54
November	20,460	682.00
December	43,969	1,418.35
Total	182,964.7	

Table 2 - 2015 Discharge Summary

2016		
Month	**Pumped Discharge Volume (m^3)**	**Mean Daily Pumped Discharge (m^3)**
January	40,522.6	1,307.18
February	40,785.4	1,456.62
March	11,138	359.29
April	7619.6	253.99
May	8130.7	271.02
June	10,707.9	356.93
July	4034.1	130.13
August	8966.8	289.25
September	5930.5	197.68
October	3771.4	121.66
November	16,655	555.17
December	5,609.6	180.95
Total	163,871.6	

Table 3 - 2016 Discharge Summary

2017		
Month	**Pumped Discharge Volume (m^3)**	**Mean Daily Pumped Discharge (m^3)**
January	8,306.5	267.95
February	14,150	505.36
March	22,750.9	733.90
April	2,987.2	99.57
May	5,231.3	174.38
June	1,437.2	47.91
July	2,616.2	84.39
August	5,581.3	180.04
September	6,531.9	217.73
October	7,359	237.39
November	3,513.4	117.11
December	7,636.4	246.34
Total	88,101.3	

Table 4 - 2017 Discharge Summary

Raw data in appendix E shows a maximum daily recorded discharge of 6,600m^3, record in 2014. Below is a summary table of the maximum volumes for each year of records.

Year	Maximum Recorded Daily Discharge (m^3)
2014	6,600
2015	3,918
2016	4,580
2017	2,406

Table 5 - Summary of Maximum Daily Discharges recorded between 2014 and 2017

The Environment Agency within England has stipulated that if the component of ground water is between 26-50% then a licence application should be considered. At Hendy the water balance assessment completed by Stantec in 2018 concluded that ground water made up 29% of the water in the discharge (Appendix E). NRW has not issued numerical guidance on the surface water wholly or mainly principal. Tarmac has decided that in this circumstance that it would prefer to submit a licence application for a new authorisation at Hendy Quarry.

% Groundwater	Recommendation
0 – 25%	A licence application is not required.
26 – 50%	Review the water balance. If the level of groundwater is still greater than 25% then a licence application should be considered.
50 – 74%	Assume a licence application is needed, however, a review of the water balance may be appropriate.
75 – 100%	A licence application is required.

Figure 6 - A copy of the Numerical Limit Guidance put forward by The Environment Agency of England on the Wholly or Mainly Principal

4.0 Consumptive Element Volume Calculations

The consumptive element of the dewatering was not metered during the transitional data period (2011-2017). Therefore, it is unknown how much water has been consumed directly in the wheel wash. The following section calculates an estimated volume per annum for the wheel wash based off the assumptions listed below:

1. The output of the quarry is 100,000 tons per annum
2. There are 38 Lorry Movements through the wheel wash per day
3. Each Movement takes 3 minutes in the wheel wash
4. 275 working days per year
5. The wheel wash is capable of pumping at 26.6l/s (see Appendix D)

The wheel wash is a Hippo Elite model (specification shown in Appendix D).

Based on the 38 lorry movements through the wash per day and 3 minutes per wash it would equal 114 minutes of wheel wash use per working day. This is equal to 6,840 seconds of washing per day.

The wheel wash can pump to wash at 26.1 litres per second. Based on the above information this would mean that 181,944 litres would be consumed per day at the wheel wash. This is the equivalent of 181.94m^3 per day. Over a period of a 12-hour working day this average to 15.6m^3 per hour. The table below summarises the consumptive volume estimations.

Table 6 - Summary of Consumptive Volume

Activity	Estimated Annual Volume (m^3)	Estimated Daily Volume (m^3)	Estimated Hourly Volume (m^3)	Instantaneous Rate (L/S)
Wheel Wash	50,034	181.94	15.16	26.6

5.0 Summary

- Hendy Quarry abstracts water from its sump at a ratio of 71% surface water to 29% ground water
- Water is transferred to the permitted soak away which is metered
- There is a consumptive use at the wheel wash and this is not metered
- The highest record daily discharge from the sump was 6,600m^3 in 2014
- The Highest annual volume transferred to discharge was 182,964m^3 in 2015
- The estimated consumptive use of water from sump is 50,034m^3 per year, 181.94m^3 per day and 15.16m^3 per hour at a rate of 26.6 litres per second

Appendix A

Tenure Plan

Appendix B

Site Aerial Plan

Site Plan on OS Base

Site Water Management Plan

Appendix C

Site Contacts

Site Contact (Abstraction Returns, Site Visits)

Owen Llewellyn
Quarry Manager at Aggregates & Asphalt
Hendy Quarry
School Road
Miskin
Pontyclun
Rhondda Cynon Taff
CF72 8PG
United Kingdom
owen.llewellyn@tarmac.com
Tel: +44 1443 230976
Mob: +44 7483 978034

Application Contact (Requests for Further Information)

James Dunford
Permitting & Compliance Advisor - Project L.E.A.D at Land & Natural Resources
Meeting Street
Quorn
Loughborough
LE12 8EX
United Kingdom
james.dunford@tarmac.com
Mob: +44 7483 424941
Tel: +44 1509 622048

Application Payment

Deepa Valand
Permitting Assistant at Land & Natural Resources
Meeting Street
Quorn
Loughborough
LE12 8EX
United Kingdom
deepa.valand@tarmac.com
Tel: +44 1509 622045
Mob: +44 748 340 9404

Appendix D

Pump Data Sheet

Wheel Wash Data Sheet

Appendix E

Technical Note

Appendix F

Site Photographs

Appendix G

Planning Application Reference Document

Abstraction Permit

Discharge Permit