



We are
WHH



Warrington and
Halton Hospitals
NHS Foundation Trust

WHH Board of Directors Extra-Ordinary - Meeting Part 2

Wednesday 25 October 2017

10.45am-12.00pm

Trust Conference Room

**Warrington and Halton Hospital NHS Foundation Trust
Agenda for a meeting of the Board of Directors held in public (Part 2)**

Wednesday 25 October 2017, time 10.45am-12.00pm
Trust Conference Room, Warrington Hospital

<p align="center">Warrington and Halton Hospitals NHS Foundation Trust. Agenda for a meeting of the Board of Directors Part 2 held in public. Wednesday 25th October 2017 10.45am-12.00pm Trust Conference Room, Warrington Hospital</p>					
AGENDA REF PBM/	ITEM	PRESENTER	PURPOSE	TIME	
BM/17/10/108	Welcome, Apologies & Declarations of Interest	Steve McGuirk, Chairman	N/A	10:45	Verbal
BM/17/10/109	Business Case for e- Prescribing	Jason DaCosta Director of IM+T	Approval		Paper
BM/17/10/110	Financial Position and Forecasting Year End	Andrea McGee Director of Finance + Commercial Development	Assurance	11.00am	PPT
	Date of next meeting: 29th November 2017, Trust Conference Room				

REPORT TO BOARD OF DIRECTORS

AGENDA REFERENCE:	BM/17/10/109	
SUBJECT:	ePrescribing (ePMA) Business Case	
DATE OF MEETING:	25 October 2017	
ACTION REQUIRED	For approval	
AUTHOR(S):	Choose an item.	
EXECUTIVE DIRECTOR SPONSOR:	Jason DaCosta, Director of Information Technology	
LINK TO STRATEGIC OBJECTIVES:	SO1: To ensure that all care is rated amongst the top quartile in the North West of England for patient safety, clinical outcomes and patient experience	
LINK TO BOARD ASSURANCE FRAMEWORK (BAF):	BAF3.3: Clinical & Business Information Systems	
	Choose an item.	
	Choose an item.	
STRATEGIC CONTEXT	Further develop the trust ePR through implementation of Electronic Prescribing.	
EXECUTIVE SUMMARY (KEY ISSUES):	The trust has an opportunity to access central funding to deploy Lorenzo ePrescribing software. Benefits include increased patient safety and lower costs through reducing transcription errors and forcing adherence to agreed medication formulary.	
RECOMMENDATION:	Board approves the Business Case and the trusts engagement with DXC through the NHS Digital centrally funded contract.	
PREVIOUSLY CONSIDERED BY:	Committee	Finance and Sustainability Committee
	Agenda Ref.	FSC/17/10/123
	Date of meeting	18 October 2017
	Summary of Outcome	To be recommended to the board for consideration.
FREEDOM OF INFORMATION STATUS (FOIA):	Partial FOIA Exempt	
FOIA EXEMPTIONS APPLIED: (if relevant)	Section 43 – prejudice to commercial interests	

BUSINESS CASE

Division: IM&T	Author: Jason DaCosta
	Executive Lead: Alex Crowe

Project: ePrescribing (ePMA)	Date: 17th Oct 2017
-------------------------------------	---------------------------------------

Quality & Safety	✓	Business Development	✓	Capital	✓
-----------------------------	---	-----------------------------	---	----------------	---

1.0 Purpose

This business case proposes to progress implementation of electronic prescribing and medicines administration (ePMA) deployment unit.

2.0 Background

In February 2016 Warrington & Halton Hospitals (WHH's) Executive Team took the difficult decision to reject a business case for electronic prescribing and medicines administration (ePMA) deployment unit - due to the need to stabilise the recently implemented Lorenzo deployment units. Concerns on speed and reliability of the system alongside the first of type implementer i.e. Sheffield University Hospitals NHSFT, had not approved a go-live date on their pilot ward.

There is a requirement by NHS Digital and as expected by the Care Quality Commission and NHS Improvement for the Trust to approve a viable plan to implement ePMA fully by 2020 which forms part of the approved Hospital Pharmacy Transformation Plan (HPTP).

This timescale is included in the Pharmacy Transformation Plan which went to board in May.

The Trust has been presented with a windows of opportunity to re-engage with DXC and NHS Digital to implement ePrescribing (known as ePMA by DXC) project through the funded Lorenzo programme. This window of opportunity closes in March 2018. Essentially, we need to be using live software by March 2018 to access funding though the NHS Digital agreement with DXC. Achieving a go live by March 2018 and therefore accessing this funding will save c£700k purchase and maintenance costs.

The addition deploying Lorenzo ePMA as our ePrescribing software will build on the investment in the single, shared digital ePR platform made to date and enable us to:

- Work towards achieving HiMSS level 7 ensuring patient safety and excellence in care and efficiency
- Make patient care safer through the use of ePMA that will reduce medication errors where prescribing is rules and evidence based.
- We ensure we have the right patient, give the right medication, and at the right time; and that prescribing, medications administration and compliance data is digitally captured and can be instantly shared

WHH's current system for prescribing and administration of medicines is paper based, with the exception of discharge prescriptions, ED and DVT clinic outpatient prescribing and chemotherapy. Problems with the current system include:

1. Illegible hand writing on prescriptions and charts
2. Transcription errors on prescription charts for new admissions, re-writes and discharges,
3. Recording of incomplete information on the prescribing order
4. In-appropriate prescribing orders,
5. Prescription of medication to which the patient is allergic or has had an adverse reaction to, or that interacts with other prescribed medication,
6. Lost or misplaced prescription charts,
7. Time wasted in transferring the prescription chart from wards to dispensary and back
8. Error in calculations for specific medicine doses,
9. CD record errors on administered controlled drugs,
10. Omitted doses when the prescription chart is off the ward,
11. Incorrect administration of the wrong drug, strength, dose or frequency of medication

EPMA systems are specifically designed to reduce the risks associated with traditional methods of prescribing and administering medicines highlighted above.

3.0 Proposed Service Development

The ePMA Deployment Unit comprising four parts:

- Part 1 – initial prescribing and administration functionality
- Part 2 – enhanced prescribing and administration functionality
- Part 3 - dose range checking utilising FDB content
- Part 4 – ward stock control

This project is to deploy Part 1 functionality **first go live** as a prototype to C21 Cardiology ward and CCU Coronary Care Unit 5th March 2018.

The business process covered:

- ❖ Medications Clerking
- ❖ Care on Ward
- ❖ Drug Rounds
- ❖ Discharge Transfer
- ❖ Pharmacist Verification and Dispense

4.0 Benefits

Reoccurring cash releasing benefits will start to be realised from 2019/20 . These cash releasing benefits have been calculated as follows:

Benefit Description	Rationale	Metric	Cash Releasing Value
Reduction in stationary costs	Based on 2016 / 17 expenditure on drug prescription kardexes	Annual cost of stopping paper prescription items and purple pens.	£14,817
Improved medicines optimisation processes (source NHS Digital)	Improved adherence to the medicines formulary A key benefit will be tighter control of the antibiotics formulary with use of the correct antibiotic for the optimal period of time.	Drug Budget PBR tariff = £5m, assume 3% waste due to lack of adherence to formulary through using order sets.	£150,000
Reduction in misappropriation of medicines	Greater visibility of medicines usage in clinical areas	No baseline data	£10,000
Total Per annum			£174,817

Non cash releasing benefits from implementing an ePMA system have been estimated as follows:

Benefit Description	Rationale	Non-Cash Releasing Measure
Reduction in medication errors	Savings based on reductions in litigation (paid by insurance), reduced length of stay, and reduced costs of corrective treatments.	£888,641
Reduction in adverse drug reactions (ADRs)	Savings based on reduced admissions and bed occupancy	£100,000
Time saving on searching for prescription charts/ misplaced charts	Pharmacy staff	£10,000
	Nursing staff	£69,437
	Medical staff	£35,000
Time saving on rewriting prescription charts	Medical staff time saved	£15,000
Time saving on transporting prescriptions to Pharmacy*	Electronic transmission of prescription / supply requests	£30,000
Total		1,148,078

Benefits Profile

Cash releasing Savings											
Detail	15/16 £	16/17 £	17/18 £	18/19 £	19/20 £	20/21 £	21/22 £	22/23 £	23/24 £	24/26 £	All Years £
Cash Releasing Profile	0	0	0	0	87,409	174,817	174,817	174,817	174,817	174,817	961,494
Non Cash Release											
Detail	15/16 £	16/17 £	17/18 £	18/19 £	19/20 £	20/21 £	21/22 £	22/23 £	23/24 £	24/26 £	All Years £
Non Cash Releasing Profile	0	0	0	0	574,039	1,148,078	1,148,078	1,148,078	1,148,078	1,148,078	6,314,429
Total	0	0	0	0	661,448	1,322,895	1,322,895	1,322,895	1,322,895	1,322,895	7,275,923

The greatest benefits to be derived from implementing the EPMA system are those related to improving the safe provision of care to patients(See below)

1. Electronic access to GP records
2. Mandatory fields to capture allergies and sensitivities
3. Legible prescriptions, doses and frequencies, with no crossing out
4. Defined medication dose sentences
5. Pre-populated order sets
6. Mandatory fields when generating an order set to ensure all minimum prescription data entered
7. Promotion of the Hospital Medicines Formulary
8. Alert system for missed / late doses
9. Medicines database with alert functionality for drug – allergy and drug – drug interactions and patient – drug interactions
10. Reduction in the need to transcribe on admission, no need to re-write prescriptions during the inpatient stay or transcribe at discharge
11. Information about medicines left unchanged, started, stopped and changed during admission are captured in the discharge prescription
12. Ability to restrict prescribing access to certain drugs
13. Elimination of the use of inappropriate decimal points, abbreviations, unit measures.
14. Clear audit trail in terms of identifying prescriber, administrator, checker rather than determining illegible signatures
15. More timely supply of medicines facilitated by electronic ordering on the ward and transmission to Pharmacy
16. Alert system to highlight 'critical medicines' to ensure timely administration
17. Automated reports to provide accurate data highlighting issues with aspects of medicines management (e.g. non-formulary prescribing, non-compliance with Antibiotic Formulary, missed doses, duplicate orders) so that support can be provided to
18. Improved patient experience – reduction in prescribing and administration errors, more timely supply of medicines (including critical medicines and medicines for discharge)

address the issues.

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 19. Electronic Patient Record – better data quality and real time information | 20. Improved work processes for staff – eliminate searches for misplaced drug charts |
| 21. Eliminate rewriting of drug charts | 22. Automated transcription of medicines into the discharge prescription |
| 23. Reduce duplication of work due to ‘right first time’ | 24. Automated transmission of medicine order from ward to dispensary |
| 25. Infection prevention and control – promote antibiotic formulary compliance (e.g. indication and duration of treatment) | 26. Alerts for at risk patients |
| 27. Administration alerts | 28. Improved targeting of antibiotic ward rounds |
| 29. Restricted access to certain antibiotics | 30. Cash releasing efficiencies – no purchase of paper prescription charts |
| 31. Improved formulary compliance | 32. Reduced medicines misappropriation |
| 33. Reputation – demonstrating that we are a forward thinking organisation that utilises modern technology to improve care for patients | 34. Delivery of the EPMA element of the Digital roadmap |

5.0 Financial Appraisal

Over the last 2 years The Trust has made substantial investment in ePR for both people and services. More specifically, an experienced Project team has been established for ePR Development and Benefits Realisation/Process Change. As a result the staff required to implement ePMA **first go live** in 17/18 will be utilising Trust resources, thereby negating the need for specialist expensive consultancy support

Service charges for Lorenzo and therefore ePMA for years 1 (15/16) to 6 (20/21) will be met by Department of Health and paid directly to DXC. The table below shows these charges transferring to the trust at 21/22.

The EPMA project will require a Programme Board which will report into the IM&T Board. The Program Board would be supported by a Project Team, with flexible membership. A key role of the Board and Project Team will be to work with the wider clinical teams to promote full engagement with the process of EPMA roll-out and ensure successful implementation,

10 Year Financial Summary

Narrative	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	28/29	29/30	Total
	£	£	£	£	£	£	£	£	£	£	£	£	£
Capital Investment													
Purchase	0	250,000	250,000	0	0	0	0	0	0	0	0	0	500,000
Revenue Investment													
BAU	267,000	0	0	0	0	0	0	0	0	0	0	0	267,000
Maintenance	0	0	0	0	49,836	49,836	49,836	49,836	49,836	49,836	49,836	49,836	398,688
Depreciation	0	25,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	25,000	500,000
Interest	0	8,313	15,750	14,000	12,250	10,500	8,750	7,000	5,250	3,500	1,750	438	87,500
	267,000	33,313	65,750	64,000	112,086	110,336	108,586	106,836	105,086	103,336	101,586	75,274	1,253,188
Revenue Savings													
Cash Releasing	0	0	-87,409	-174,817	-174,817	-174,817	-174,817	-174,817	-174,817	-174,817	-174,817	-174,817	-1,660,762
	0	0	-87,409	-174,817	-174,817	-174,817	-174,817	-174,817	-174,817	-174,817	-174,817	-174,817	-1,660,762
Net Revenue Impact (cash releasing only)	267,000	33,313	-21,659	-110,817	-62,731	-64,481	-66,231	-67,981	-69,731	-71,481	-73,231	-99,544	-407,574
Revenue Savings													
Non Cash Releasing	0	0	-574,039	-1,148,078	-1,148,078	-1,148,078	-1,148,078	-1,148,078	-1,148,078	-1,148,078	-1,148,078	-1,148,078	-10,906,741
	0	0	-574,039	-1,148,078	-1,148,078	-1,148,078	-1,148,078	-1,148,078	-1,148,078	-1,148,078	-1,148,078	-1,148,078	-10,906,741
Net Revenue Impact (cash and non releasing)	267,000	33,313	-595,698	-1,258,895	-1,210,809	-1,212,559	-1,214,309	-1,216,059	-1,217,809	-1,219,559	-1,221,309	-1,247,622	-11,314,315

Assumptions

The prototype system is created in 17/18 using existing resources all ready employed. This BAU cost has been included as additional revenue investment in the table above.

Using existing staff will meet the 17/18 revenue investment costs.

Trust capital allocated for additional staffing to rollout the system across the remainder of the trust starting in 18/19 – namely one Programme Manager, one Product Specialist and one additional pharmacist (part time).

Additional training support will be provided if required from Trust BAU resources.

Final capital figures will be confirmed each year through capital programme allocation process and documentation.

No additional costs are required for estate and IT ward equipment or changes. Any changes or additions will be covered from BAU infrastructure programmes.

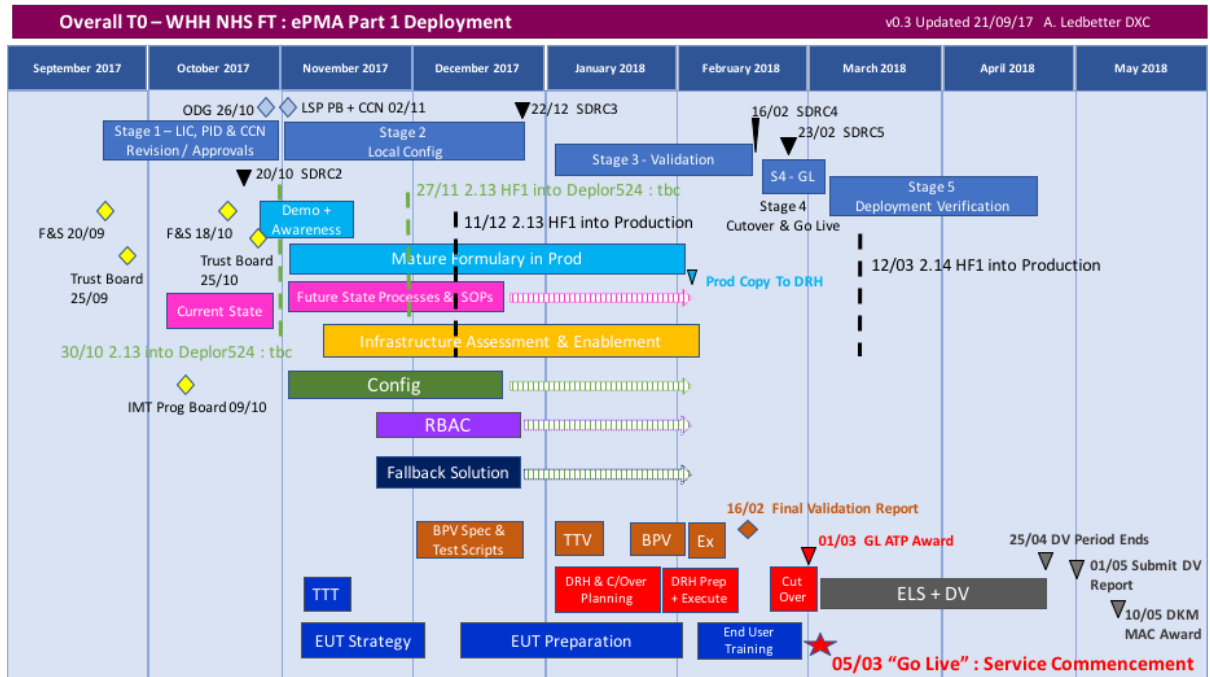
No provision for clinical backfill for training as the classroom training will be no more than 2 hours

24*7 support will be provided as is; wards will be expected to be self-sufficient. This will be reviewed after the first go-live of the prototype.

Half benefits start to be realised in year 5 (19/20); the full rollout will take 24 months from 18/19.

Capital asset life = 10 year

The following rollout plan will be followed for 17/18 –



A trust wide programme plan for 18/19 will follow once the system is available and signed off at the end of March.

6.0 Risks

The table below represents the main risks that apply to ePMA first go live, at this time and will be managed by IMT Programme Board.

Risk No.	Risk/issue description	Impact score 1 = V Low 5 = V High	Likelihood score 1 = Rare 6 = Issue	Mitigating action plan/issue resolution plan	Estimated Cost of Risk £
001	Trust experiences operational problems when ePMA goes live	5	4	Continue to study the experiences of live Lorenzo sites carefully to ensure that our plans enable us to avoid the levels of disruption that some Trusts have experienced. However, in addition, maintain focus on support for staff affected by process changes and the introduction of new systems from the start of the project. Ensure that all staff have been fully trained in new procedures, are supported by written standard operating procedures in all cases, are clear about their individual new roles and adequate floor walkers/SMEs are in place before the system goes live. Ensure that the system has been fully tested and adequate performance levels have been demonstrated before go-live takes place. Ensure that the PID commitments of 80% of all users and 100% of all go-live staff, have been trained before go-live This should reduce the potential for operational problems at this point.	£20,00
006	Risk that as Lorenzo ePMA is a new DU it would be pragmatic to expect that critical fixes and/or product changes may be required.	3	3	Work with CSC product team from the early planning stages to ensure that product is fit for purpose for a day 1 go live, and ensure defects are fixed. Work closely with CSC and the Product Engagement group on future enhancements and product changes, for ePMA optimisation project.	£36,400

6.1 Failure Modes Effects Analysis (FMEA)

This will be completed as the rollout project commences and the final functionality and workflow of the system is known.

7.0 Recommendations

The recommendation is to approve the business case for the deployment of ePMA functionality, with 10 year costs to the trust of £1,253,188 and a cash release benefit of £1,660,762.

The system will become available as a prototype in C21 Cardiology ward and CCU Coronary Care Unit from the 5th March 2018. Final system configuration will be agreed in 18/19 as part of a trust wide rollout.

Amendment History

Issue	Date	Author	Reason
Version1	4/10/17	Sue Caisley	Originally described as a business development
Version2	6/10/17	Sue Caisley	Further input from IM&T demonstrated there was potential for this to be business case
Version 3	11/10/17	Alex Crowe & IM&T Board	Due to funding requirement from Trust it was deemed more of a business case that was not IT centric in order for Executive Team to be better placed to understand requirements. Detailed IMY Business Case supported as appendix
Final V1	16/10/17	Jason DaCosta & Diane Mathers	Final version following Finance and Pharmacy input in costs and benefits.
Final V2	17/10/17	Steve Barrow & Jason DaCosta	Update with 10 year financial profile.
Final V3	18/10/17	Jason DaCosta	Update following feedback at F&S and Executive Committee



Corporate Calendar v4 Jan 2018 - Mar 2019

- TB** WED Board 6xyr ALL NEDs/Eds
- AC** THURS Audit 6xyr ALL NEDs
- Q&A** TUES Quality + Assurance 6xyr NED Chaired
- NARC** WED NARC as req NED only
- OB** MON Trust Ops Board Mthly Eds
- CFC** THURS Charitable Funds 1/4ly NEDs
- COG** THUR Council of Governors 1/4ly NEDs CEO
- FSC** WED Finance+Sustainability Mthly
- BTO** WED Board Time Out 4xyr NEDs/Eds

- 10:00 - 4:00 SAME MONTH AS Q&A
- 9:00 - 12:00 ALTERNATIVE MONTH TO BOARD
- 2:00-5:00 SAME MONTH AS BOARD
- 4:00 - 5:30
- 1:00 - 5:00 2 DAYS BEFORE BOARD (except where Bank Holiday Monday)
- 1:30-3:30
- 4:00 - 6:00 1st THURSDAY Alternate venues Warrington + Halton
- 2:00-5:00 WEDNESDAY BEFORE TRUST BOARD
- ALL DAY at HALTON

Operational Committees (Exec led)

- QPS** ICIC
- KPI** Estate
- Work** OPD
- STRAT**
- Flow**
- IM&T**
- EPRR**

GOVERNORS COMMITTEES

- QIC** TUES 11-1pm 4x yearly
- GEG** WED 11-1pm 4 x yearly

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	2019 Jan	2019 Feb	2019 Mar	
Mon	1 BH									1						Mon
Tue	2				1 QIC/Q&A					2			1 BH			Tue
Wed	3				2			1		3			2			Wed
Thu	4	1	1		3			2		4	1		3			Thu
Fri	5 OPD	2	2 OPD		4 OPD	1	OPD	3		5	2 OPD		4	1	1	Fri
Sat	6	3	3		5	2		4	1	6	3	1	5	2	2	Sat
Sun	7	4	4	1	6	3	1	5	2	7	4	2	6	3	3	Sun
Mon	8 STRAT	5 STRAT	5 STRAT	2 BH	7 BH	4 STRAT	2	6 BH	3 STRAT	8 STRAT	5 STRAT	3	7	4	4	Mon
Tue	9 QIC/Q&A	6	6 Q&A	3	8 STRAT	5	3 Q&A	7	4 QIC/Q&A	9	6 Q&A	4	8 QIC/Q&A	5	5 Q&A	Tue
Wed	10	7 GOVIND	7	4	9	6	4	8	5	10	7	5	9	6	6	Wed
Thu	11 Estate	8 Estate	8 Estate	5 Estate	10 Estate	7 Estate	5 Estate	9	6 Estate	11 Estate	8 Estate	6	10	7	7	Thu
Fri	12 Flow	9 Flow	9 Flow	6 Flow	11 Flow	8 Flow	6 Flow	10	7 Flow	12 Flow	9 Flow	7 Flow	11	8	8	Fri
Sat	13	10	10	7	12	9	7	11	8	13	10	8	12	9	9	Sat
Sun	14	11	11	8	13	10	8	12	9	14	11	9	13	10	10	Sun
Mon	15	12	12	9	14	11	9	13	10	15	12	10	14	11	11	Mon
Tue	16	13	13	10	15	12	10	14	11	16	13	11	15	12	12	Tue
Wed	17 GEG	14	14	11 GEG	16	13	11 GEG	15	12	17 GEG	14	12	16	13	13	Wed
Thu	18	15 CFC COG	15	12	17 CFC COG	14	12	16 CFC COG	13 AMM	18	15 CFC COG	13	17	14 COG CFC	14	Thu
Fri	19 KPI	16 KPI	16 KPI	13 KPI	18 KPI	15 KPI	13 KPI	17 KPI	14	19 KPI	16 KPI	14 KPI	18 KPI	15 KPI	15 KPI	Fri
Sat	20	17	17	14	19	16	14	18	15	20	17	15	19	16	16	Sat
Sun	21	18	18	15	20	17	15	19	16	21	18	16	20	17	17	Sun
Mon	22 ICIC	19 ICIC	19 ICIC	16 ICIC	21 ICIC	18 ICIC	16 ICIC	20	17 ICIC	22 ICIC	19 ICIC	17 ICIC	21	18	18	Mon
Tue	23 Work	20 Work	20 Work	17 Work	22 W A	19 Work	17 Work	21	18 Work	23 Work	20 Work	18 AC	22 Work	19 Work	19 Work	Tue
Wed	24 FSC	21 FSC	21 FSC	18 FSC	23 FSC	20 FSC	18 FSC	22 FSC	19 FSC	24 FSC	21 FSC	19 FSC	23 FSC	20 FSC	20 FSC	Wed
Thu	25 QPS	22 AC QPS	22 QPS	19 AC QPS	24 TB+End	21 AC QPS	19 QPS	23	20 QPS	25 AC QPS	22 QPS	20 QPS	24 QPS	21 AC QPS	21 QPS	Thu
Fri	26	23	23	20	25	22	20	24	21	26	23	21	25	22	22	Fri
Sat	27	24	24	21	26	23	21	25	22	27	24	22	26	23	23	Sat
Sun	28	25	25	22	27	24	22	26	23	28	25	23	27	24	24	Sun
Mon	29 OB	26 OB	26 OB	23 OB	28 BH	25 OB	23 OB	27 BH	24 OB	29 OB	26 OB	24	28 OB	25 OB	25 OB	Mon
Tue	30 EPRR	27 EPRR	27 EPRR	24 EPRR	29 OB	26 EPRR	24 EPRR	28 OB	25 EPRR	30 EPRR	27 EPRR	25 BH	29	26	26	Tue
Wed	31 TB	28 BTO	28 TB	25 BTO	30 EPRR	27 BTO	25 TB	29	26 TB	31 BTO	28 TB	26 BH	30 TB	27 BTO	27 TB	Wed
Thu			29	26	31	28	26	30	27		29	27	31	28	28	Thu
Fri			30 BH	27		29	27	31	28		30	28		29	29	Fri
Sat			31	28		30	28		29			29		30	30	Sat
Sun				29			29		30			30		31	31	Sun
Mon				30			30		31			31				Mon
Tue							31									Tue

School Hols 30 March-13 April 2018: 28 May-8 June 2018: Summer 23 July-1 September 2018: 22 October-26 October 2018: 21 December-2 January 2019: 18 February-22 February 2019
Easter 2019 5-23 April 2019